

Faculty of Allied Medical Sciences

**Description of Courses offered
by the**

**Department of Anesthesia and
Resuscitation Technology**

2023 / 2022

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Department of Anesthesia and Resuscitation Technology**

Course Number Course Name (Prerequisite: -) (.....) Cr. Hrs

Course Number	Course Name (prerequisite)	Credit hours
12032115	Pathology	3 س 3 (3+0)
The mechanism of disease occurrence is identified and includes the identification of the reaction of cells, tissues and organs of the body to the factors causing diseases, the study of the mechanism of occurrence of acute and chronic infections and cancerous diseases, as well as the identification of the mechanism of occurrence of diseases such as diabetes, heart failure, and bronchial asthma. Diseases and symptoms of various body systems, as well as complications resulting from these diseases are also explained.		
12012216	Clinical Psychology	2 س 2 (2+0)
Mental and psychological illnesses with emphasis on the impact of injuries and disabilities on the condition Psychosocial for patients and the role of health personnel in preparing patients before operations psychologically.		
12041218	Medical ethics	1 س 1 (1+0)
The rights of the patient, to respect, privacy, integrity and independence in decision-making, patient safety, patient protection law, and the legal responsibility of health personnel for their work in the professional context and an understanding of responsibility and obligations in the event of taking legal medical procedures. Informed consent and confidentiality of information. Legal issues, misconduct and negligence; Risk management, infection control, quality of services and legal aspects, occupational risks, rules of correct medical conduct, liability and accountability, enforcement of standards in health professions to promote quality care; Code of Business Conduct: Relationship with patients, relationship with colleagues, and with other professionals.		
11021205	General Medical Physics	3 س 3 (3+0)
A practical introduction to the main physical principles applied in anesthesiology, including physical laws of matter such as gases, liquids, vapor and air, and their applications in work. Knowledge of all types of pressure and related laws and transferring the substance from one state to another, and how to preserve liquids and gases in all their forms, whether they are cylinders or a main compressor.		
11011281	General Biology	3 س 3 (3+0)
Cell structure, cell chemistry, cellular respiration, photosynthesis, cell communication, cell division, principles of molecular genetics, the genetic code, genetic material replication and reproduction, building proteins, inheriting bacteria and viruses, hormonal regulation in plants and animals, principles Biological classification and basics of ecosystems of living organisms.		
11011282	General Biology Lab	1 س 1 (0+3)
Cell structures, the chemical components of a living cell and cellular activities (methods of reproduction, enzymatic activities, physical properties, respiration, and photosynthesis). The course also includes the study of plant and animal tissues, the diversity of organisms, and genetics.		
12021211	Human Anatomy	3 س 3 (3+0)
Introduction to the various scientific terms of anatomy, as well as identifying the types of tissues with the naked eye and at the microscopic level, starting from the cell and the structure of tissues of various types and how they work, as well as studying the anatomy of various organs of the human body, skin and its appendices, bones, muscles, the nervous system, the circulatory system and the heart Respiratory system, urinary, reproductive, and endocrine systems. The course links the anatomy of organs and functions.		

12021212	Human Anatomy Lab	1 سى و (0+3)
A practical application to learn about the anatomy of the skin, the musculoskeletal system, the nervous system, the cardiovascular system, the lymphatic system, the respiratory system, and the urinary system.		
11011107	General Chemistry	3 سى و (3+0)
Introduction to the measurement of significant numbers, chemical reactions, chemical calculations, gaseous states, thermochemistry, electronic and periodic composition, chemical bonds, molecular shapes, states of matter and the force of attraction between molecules, physical properties of solutions, principles of equilibrium.		
11011108	General Chemistry Lab	1 سى و (0+3)
Basic laboratory techniques, determination of the physical and chemical properties of a substance, and how to determine the experimental formulation between compounds.		
12042221	Human Physiology	3 سى و (2+3)
The detailed study of the natural physiology of the human body, starting with an introduction to the plan of building and functioning of the traditional human cell and a continuation of an understanding of the electrical membranes of nerves and muscles, as well as an explanation of the mechanism of normal work of the central and decentralized nervous system, the muscular system, and the skeleton , Circulatory system, blood vessels, urinary system, respiratory system, endocrine system, digestive system, and ending with the reproductive system. The role of each of the organs on the integrated balance of the body is also explained and explained.		
09012103	Fundamentals of nursing for anesthesia	2 سى و (1+3)
Information and skills necessary to assess an individual's health during life stages, apply health assessment based on the approved functional health pattern that affects the individual's health status, and distinguish any change from the normal health status. And the basics of nursing care for surgery patients, the role of responsible health personnel and the conditions related to patient care before the operation (that is, in the evening of the day before the operation) and on the morning of the day of the operation, and until the patient returns to his room. And sterilization techniques.		
12032122	Physics of anesthesia	2 سى و (2 +0)
The physics of electronic devices and equipment to monitor the vital signs of patients, how they work, pressure measuring devices or analyzes of blood gases and used evaporators, and how to deal with them in a scientific way, how to maintain and deal quickly in emergency cases. Physics of respiratory devices of all kinds, whether used in operating rooms or intensive care.		
12032223	Pathophysiology of anesthesia	2 سى و (2 +0)
Understanding of the pathophysiological foundations of all body systems, how to deal with them before the operation, the possibilities of improving the pathological condition before the operation, dealing with diseases during anesthesia and the surgical procedure, and assessing the state of severity. And dealing with the same cases after completing the process and classifying the admission of cases for appropriate care, whether intensive care or intensive cardiac care ... etc.		
12032241	Anesthesia and medical diseases	3 سى و (3+0)
Basic information related to internal diseases, the concepts, rules and regulations that govern the way internal diseases are dealt with before and after surgery, the study of internal diseases about surgical procedures. The student will also learn about the most important internal diseases affecting anesthesia, common internal diseases (such as diabetes, hypertension, obesity, arterial thrombosis) and special diseases related to anesthesia (such as muscle weakness, neuromuscular diseases, and pernicious fever of anesthesia).		
05023121	Pharmacology 1	3 سى و (3+0)
Introduction to general principles of pharmacology, including pharmacokinetics and pharmacodynamics of drugs in general, particularly drugs related to anesthesia, and the intensive care unit, and describes the pharmacokinetics of the drug in special patient groups such as patients with obesity, pregnant women, preterm infants, newborns, and children. Finally, it describes various classes of drugs that act on all body systems, with special attention to anesthetic agents and groups.		

12032211	Pharmacology for anesthesia	3 سى (2+3)
The basic and necessary information about drugs, their classifications, their different names, whether scientific or commercial, their work, their absorption and excretion from the body, and how to administer them with a focus on drugs related to anesthesia in terms of composition, negative effect, different doses and poisoning.		
12033111	Advanced Medicines for Anesthesia Technology	3 سى و (2+3)
Scientific knowledge about anesthetic drugs, muscle relaxants and invasive inhalants, the science of local and injection anesthesia, anti-vomiting drugs and pain management, sedative drugs for simple and daily cases, Doses according to weight, age, and pathophysiological condition.		
12032121	Introduction to anesthesia technique	3 سى و (3+ 0)
The basic information in anesthesia technology, starting with the history of anesthesia globally and locally, and the beginning of the modern history of the science of anesthesia as we know it today, and then knowledge of anesthesia tools and devices such as devices, vaporizers, and others, and how to examine and deal with them scientifically as is also required for monitoring devices. After that, students are taught a prescription for every organ such as the heart, children, brain, nerves, and other different body systems.		
12032212	Principles of preparation for surgery	3 سى و (2+3)
The medical preparation of the patient and the necessary examination for the pre-operative situation, which will enable the optimal procedures to be taken before, during and after the operation. It also explains the medical standards that must be met in critical cases, the psychological preparation of the patient for the surgery, the medicinal preparation for the surgery, the laboratory tests required to be available, and the preparation of blood and its derivatives.		
12032221	Basics of Respiratory Therapy and Artificial Respiration	3 سى و (2+3)
Basic knowledge of the necessary steps in the treatment of various problems in the airways in their chronic and acute cases, the conditions that need immediate concern and the basis for acting in these circumstances, the causes of respiratory failure, types of artificial respiration, how to perform artificial respiration in emergency respiratory cases And chronic, and care settings for patients undergoing chronic respiration (for example, in cases where the patient suffers from damage to the nerves of the respiratory muscles, inhalation of chemicals, intracranial pressure, or a problem in maintaining an open airway, etc.).		
12033122	Regional local anesthesia	3 سى و (2+3)
Introduction to basic knowledge regarding local anesthesia. Concepts, rules, and regulations that control local anesthesia, cases in which local anesthesia is prohibited, and dealing with the patient in the event of a complication of local anesthesia, the use of drugs in addition to the management and control of anesthesia tools, the factors affecting the patient, and the identification of overdose treatment and the role of a student technician Anesthesia in the preparation process.		
12033141	Clinical training 1	3 سى و (0+ 9)
This practical course allows to visit the Operations Department and learn about the anesthesia room, operating rooms and recovery rooms and their components, practical handling of anesthesia devices and tools, and how to clean and sterilize them. How to deal with the patient from the moment he arrives and prepares the operating room for the operation until he leaves the operations department. And training in the Department of Intensive Care and dealing with patients and intensive care equipment.		
12032123	Anesthesia technique tools and materials 1	3 سى و (3+0)
Basic knowledge regarding anesthesia tools. The way it was built and applied in daily clinical practice, dealing with it in the event of failure during work and maintaining the safety of the patient in all cases. It also explains the way in which these tools are sterilized, preserved and ready for use, and how to deal with the manufacturers.		
12033121	Anesthesia technique tools and materials 2	3 سى و (2+ 3)
Knowledge of all the tools that are used in anesthesia, including respirators and devices, monitoring the patient, the anesthesia devices themselves, and how to clean and sterilize them. And knowledge of the basics of its work and periodic patience and making sure of the existence of the necessary parts for the periodic change of devices, and the necessary checks for the periodic devices to ensure that they function properly during anesthesia.		

12033151	Intensive care	3 سى و (2+3)
Basic knowledge of the ICU, contents, people, and conditions related to controlling the ICU atmosphere and tools with a special focus on the risks faced by the ICU. It also identifies some medical conditions that require admission to the intensive care unit.		
12032213	Medical problems and their management	2 سى و (2+0)
Topics related to identifying risks present in operating rooms, familiarity with the procedures that can be taken to reduce or avoid these risks, biomedical waste management, adherence to professional ethics, commitment to medical ethics, commitment to documenting anesthesia, familiarity with consenting between the two parties to the health service, risks of exposure to gas Medical, familiarity with the topic of risks in the operating room, and the medical risks related to anesthesia.		
12033242	Clinical training 2	3 سى و (0+9)
Focusing on the operating room and dealing with the patient from the moment he arrives until he leaves the operating room, and training on special skills for that (formulating a solution - analyzing drugs - connecting the patient to monitoring devices, ... etc.). This is in addition to giving the student the opportunity to train in the intensive care department.		
12033243	Clinical training 3	3 سى و (0+9)
Part (30%) is carried out in two phases in the university laboratory, where training is carried out on the anesthesia apparatus and basic tools in respiratory therapy, basic resuscitation, and intravenous catheter installation, and (70%) in the hospital where what the student learned in the university is applied and applied scientifically and practically and with all safety conditions.		
12033233	Ambulatory anesthesia	3 سى و (2+3)
Rules for dealing with patients with minor operations, methods of anesthesia, anesthesia for minor operations, conscious sedation in emergency cases, the most important methods of anesthesia to care for them, and appropriate medications for use in different situations and age groups. This course also explains the role of some drugs in the resuscitation process, and resuscitation of newborns and those of different age groups.		
12033232	Anesthesia for emergency operations	3 سى و (1+6)
Rules for dealing with patients inside the emergency unit, methods of anesthesia and appropriate medicines for use in these cases, commensurate with the severity of emergency cases and their age groups. This course also explains the full coverage of emergency cases and how to deal with them, emergency surgical cases and how to deal with them, communication with emergency doctors to provide a distinctive service, the most important emergency surgical cases and preparation for them, collective emergencies, methods of classifying them and how to deal with them.		
12033244	Advanced patient monitoring	4 سى و (2+6)
Explanation of the fields of knowledge in relation to the following areas: modern and advanced equipment for patient monitoring such as brain monitoring, heart and lung efficiency, basic monitoring and information obtained, level of monitoring of the nervous system and measuring the level of anesthesia level, advanced cardiac monitoring.		
12034131	Treating pain after operations	3 سى و (2+3)
Basic knowledge regarding the causes and treatment of acute and chronic pain, the causes of pain after surgery and its management, as well as labor pain and how to deal with it.		
12034132	Advanced anesthesia techniques	4 سى و (3+3)
Anesthesia of special cases such as organ transplantation and transplantation, open heart and clinical death diagnosis.		
12034231	Specialist anesthesia	2 سى و (0+2)

Explanation of general anesthesia for various conditions - infants and premature infants, the elderly, childbirth, neurosurgery, ear, nose and throat, eyes, tumors, bones, and the complications that each of them faces, and conditions that affect general anesthesia such as alcoholism, obesity and burns. This course also explains anesthesia in cases: heart surgery and cardiac malformations, neurosurgery and spine, gynecology and obstetrics surgery, pediatric and neonatal surgery, vascular surgery and thoracic surgery.		
12034191	Field training 1	4 س م (0+12)
Introduction to basic training that includes the importance of sterilization, how to handle special tools, receive patients and supervise anesthesia. It also explains how to record the medical history, prepare the patient, and how to deal with him during the operation. Emphasis is placed on practice especially when administering medications, clinical monitoring, tools for controlling forms of anesthesia, filling in medical information, name of joint surgeries and diagnosing them in emergencies.		
12034292	Field training 2	4 س م (0+12)
Training to oversee tracheostomy and scheduling information, to enable the student later to perform venous catheterization. It also focuses on training students on how to resuscitate the patient, on ideal post-operative supervision, and how to transfer the patient to the intensive care unit. Providing students with knowledge of the tools used and enabling them to work with them.		
12031262	Microbiology	3 س م (3+0)
Focusing on bacterial germs, their different forms and anatomical parts, methods of their development and identification, and the different methods of controlling their growth through the use of chemical and physical methods, as well as the identification of antibiotics. The course also includes the study of the genetic material in microorganisms and how to use it in the manufacture of some therapeutic products by addressing the principles of biotechnology science.		
12034163:	Occupational Health Hazards	1 س م (1+0)
Knowledge of dealing with infectious cases, and dealing with chemical and radiation spills.		
12033261	Principles of management critical cases	
This course explains the critical, sudden, and unexpected incidents/event, that is out of the range of expected experiences, how to develop a 'healthy' response, and when to seek support.		
12033244	Advanced Monitoring:	4 س م (2+ 6)
Knowledge of modern and advanced patient monitoring devices such as brain monitoring, heart and lung efficiency		