

Department of Radiology Technologies (the first stage)



Skeletal anatomy course

This course provides a study of the anatomy of the skeleton and its levels, learning about its importance, and explaining the anatomical levels of the different parts of the body.

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	Skeletal anatomy
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	2 theoretical hours + 3 practical hours = 5 hours x 15 weeks = 75 hours
8. Date this description was prepared	2024
9. Course objectives	
1. Introducing the student to discovering the human body	
2. Introducing the student to the main organs of the human body	

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives
1. Introducing the student to all the body's organs and determining their locations
2. Linking the work of the members together
3. Understanding the academic material

B - The skills objectives of the course. 1. Definition of the basic concepts of anatomy 2. Introducing the student to the basic vocabulary of anatomy 3. Introducing the student to his full body and linking it to the job
Teaching and learning methods
1. Lectures 2. Video clips
Evaluation methods
1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
C. Emotional and evaluation objectives 1. By linking changes at the cell level in the anatomical organ 2. The student is able to understand the importance of organs from an anatomical perspective and the relationship and importance of each organ 3. Practical skills that enable the student to identify the parts and anatomical structures of each organ in the body
D - General and qualifying transferable skills (other skills related to employability and personal development). • Teaching the student to deal with patients and various situations. • Teaching students psychological care skills for people with disabilities and oncology patients.

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	Introduction, definition	Understands material the	2 theoretical + 3 practical	1.
Apply and test	Interactive	Skeleton of the upper limb	Understands the material	2 theoretical + 3 practical	2.
Apply and test	Interactive	The humerus and radius ulna bones	Understands the material	2 theoretical + 3 practical	3.
Apply and test	Interactive	The hand	Understands the material	2 theoretical + 3 practical	4.
Apply and test	Interactive	The muscle of upper limbs	Understands the material	2 theoretical + 3 practical	5.
Apply and test	Interactive	Joints	Understands the material	2 theoretical + 3 practical	6.
Apply and test	Interactive	Skeleton of the chest	Understands the material	2 theoretical + 3 practical	7.
Apply and test	Interactive	Vertebrate	Understands the material	2 theoretical + 3 practical	8.
Apply and test	Interactive	Skeleton of the lower limb	Understands the material	2 theoretical + 3	9.

				practica 1	
Apply and test	Interactive	The femur, tibia and fibula bones	Understands the material	2 theoreti cal + 3 practica 1	10.
Apply and test	Interactive	The foot	Understands the material	2 theoreti cal + 3 practica 1	11.
Apply and test	Interactive	The muscles of lower limbs	Understands the material	2 theoreti cal + 3 practica 1	12.
Apply and test	Interactive	Skull	Understands the material	2 theoreti cal + 3 practica 1	13.
Apply and test	Interactive	Facial bones and TMJ	Understands the material	2 theoreti cal + 3 practica 1	14.
Apply and test	Interactive	Nasal cavity and paranasal sinus	Understands the material	2 theoreti cal + 3 practica 1	15.

12. Infrastructure

1- Required prescribed books	Training bag
2- Main references (sources)	Netter Atlas of human Anatomy Abrahams, Clinical Atlas of Anatomy
A-Recommended books and references (scientific journals, reports,...)	Pub med
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

13. Course development plan

The curriculum development plan is based on the following:

- Giving the prescribed scientific material and observing and analyzing the students' results
- Study feedback from students' comments about vocabulary
- Study the practical laboratory notes for the course
- Comparing current vocabulary with the vocabulary of corresponding colleges in the field

General physics course

This course provides an introduction to the general rules and basic principles of physics, learning about units of measurement, electricity, magnetism, gravity, and kinetic energy, and determining the relationship between work and energy.

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	General physics
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	2 theoretical hours + 3 practical hours = 5 hours x 15 weeks = 75 hours
8. Date this description was prepared	2024
9. Course objectives It is for the student to become acquainted with the scientific concepts, foundations, and facts in the general physics curriculum, and to consolidate some of the educational strategies and scientific concepts related to the physics curriculum at the university education stage, and through them to	

define for the student the educational and psychological methods and theories in studying physics.

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives 1- That the student learns the basics of physics 2- The student should distinguish between what is theoretical and what is applied 3- The student should analyze physical theories practically 4- The student should evaluate the operation of the devices and their applications
B - The skills objectives of the course. 1- It involves encouraging students to be creative 2- Creating a spirit of perseverance through continuous encouragement of joint and effective cooperation among them to fulfill their academic requirements. 3- Enabling the student to participate and discuss in preparing research, reports, and group work. 4- Skills according to the student's mental and intellectual ability
Teaching and learning methods
3. Lectures 4. Video clips
Evaluation methods
1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
C. Emotional and evaluation objectives 1- Brainstorming 2- Logical analysis of a problem and its solution (critical analysis in learning) 3- High thinking to make good decisions
D - General and qualifying transferable skills (other skills related to employability and personal development). 1- Verbal communication 2- Teamwork 3- Analysis and application 4- Planning and organization 5- Time management

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	Standard units of measurements	Understands the material	2 theoretical + 3 practical	1
Apply and test	Interactive	Electricity. Magnetism	Understands the material	2 theoretical + 3 practical	2
Apply and test	Interactive	Mechanics	Understands the material	2 theoretical + 3 practical	3
Apply and test	Interactive	Law of conservation of momentum	Understands the material	2 theoretical + 3 practical	4
Apply and test	Interactive	Conservation of Energy	Understands the material	2 theoretical + 3 practical	5
Apply and test	Interactive	Gravitational potential energy	Understands the material	2 theoretical + 3 practical	6
Apply and test	Interactive	Simple harmonic motion	Understands the material	2 theoretical + 3 practical	7
Apply and test	Interactive	Dynamics of Rotational Motion	Understands the material	2 theoretical + 3 practical	8
Apply and test	Interactive	Torque-angular acceleration relation	Understands the material	2 theoretical + 3	9

				practical	
Apply and test	Interactive	Static equilibrium experiments	Understands the material	2 theoretical + 3 practical	10
Apply and test	Interactive	Periodic Motion experiment	Understands the material	2 theoretical + 3 practical	11
Apply and test	Interactive	Gravitational potential energy	Understands the material	2 theoretical + 3 practical	12
Apply and test	Interactive	Heat and temperature	Understands the material	2 theoretical + 3 practical	13
Apply and test	Interactive	Methods of heat transferring	Understands the material	2 theoretical + 3 practical	14
Apply and test	Interactive	laws of pressure.	Understands the material	2 theoretical + 3 practical	15

12. Infrastructure

1- Required prescribed books	Training bag
2- Main references (sources)	1.M. Radhi Al-Qurayshi and H. Qasim. AL-Mosawi " Radiation Physics and its applications in diagnostic radiological techniques", Middle Technical University (MTU), Iraq, (2015). 2. RF Farr and PJ Allisy-Roberts (Physics for Medical Imaging) Saunders, 4th edition (2001). 3. Stewart Carlyle Bushing, "Radiologic Science for Technologists Physics, Biology, and protection" Elsevier, Inc. , 7th edition, 2017.

A-Recommended books and references (scientific journals, reports,...)	Pub med
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

13. Course development plan
The curriculum development plan is based on the following: • Giving the prescribed scientific material and observing and analyzing the students' results • Study feedback from students' comments about vocabulary • Study the practical laboratory notes for the course • Comparing current vocabulary with the vocabulary of corresponding colleges in the field

General Physiology course

This course provides an introduction to the main physiological concepts of cells and their components and the factors regulating homeostasis in the human body.
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1. Educational institution	Al-Ayen Iraqi University
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2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	General Physiology course
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	2 theoretical hours + 3 practical hours = 5 hours x 15 weeks = 75 hours
8. Date this description was prepared	2024
9. Course objectives It is for the student to become familiar with the concepts, foundations and scientific facts in the general physiology curriculum, and to consolidate some educational strategies and scientific concepts related to the physiology of the body at the university education stage.	

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives 1. Understand the main physiological concepts of cells and their components. 2. Identify the factors that regulate balance in the human body 3. Understand the physiological mechanisms of blood flow, gas exchange, and gastric secretions.
B - The skills objectives of the course. 1. It involves encouraging students to be creative 2. Creating a spirit of perseverance through continuous encouragement of joint and effective cooperation among them to fulfill their academic requirements. 3. Enabling the student to participate and discuss in preparing research, reports, and group work. 4. Skills according to the student's mental and intellectual ability
Teaching and learning methods
1. Lectures 2. Video clips
Evaluation methods

1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
C. Emotional and evaluation objectives 1. Brainstorming 2. Enhancing students' confidence by preparing them for the next academic stages 3. Writing scientific reports and reading scientific research
D - General and qualifying transferable skills (other skills related to employability and personal development). • Teaching the student to deal with patients and various situations. • Teaching students psychological care skills for people with disabilities and oncology patients

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	Introduction to Human Physiology -Cell components and organelles	Understands the material	2 theoretical + 3 practical	1
Apply and test	Interactive	:Blood Blood Functions- :blood components blood plasma, plasma proteins function	Understands the material	2 theoretical + 3 practical	2
Apply and test	Interactive	:Formed elements leukocytes (types and function), Platelets, and Erythrocytes, Erythropoietin Role in Erythrocytes Production.	Understands the material	2 theoretical + 3 practical	3
Apply and test	Interactive	:Blood Clotting clotting factors and Mechanism of Blood Clot Formation	Understands the material	2 theoretical + 3 practical	4
Apply and test	Interactive	:Fluid Compartments in the Body ICF,ECF, interstitial fluid and transcellular fluids, compositions of body fluids	Understands the material	2 theoretical + 3 practical	5
Apply and test	Interactive	:Fluid shift Diffusion, Osmosis, hydrostatic pressure, filtration & Active Transport Across Cell Membranes	Understands the material	2 theoretical + 3 practical	6
Apply and test	Interactive	:Homeostasis Blood glucose homeostasis, excretion homeostasis and Body Temperature Regulation	Understands the material	2 theoretical + 3 practical	7
Apply and test	Interactive	:Heart and blood vessels Heart function- Blood vessels function- cardiac valves and their functions- -Heart sounds.	Understands the material	2 theoretical + 3 practical	8
Apply and test	Interactive	:Circulations systemic circulation, pulmonary circulation, Cardiac cycle, cardiac	Understands the material	2 theoretical + 3	9

		output, and electrical properties		practical	
Apply and test	Interactive	:Blood Pressure Mean arterial blood pressure and its - regulation -Role of kidney in regulation blood pressure	Understands the material	2 theoretical + 3 practical	10
Apply and test	Interactive	:Measurement of lung function Lung volumes and capacities- -Exchange & transport of gases in the blood	Understands the material	2 theoretical + 3 practical	11
Apply and test	Interactive	:Gastrointestinal tract GI tract general functions- -Oral cavity function, Salivary glands function, stomach function, small intestine and large intestine function	Understands the material	2 theoretical + 3 practical	12
Apply and test	Interactive	:Gastrointestinal tract Secretions General characteristic of GI Secretions and their functions	Understands the material	2 theoretical + 3 practical	13
Apply and test	Interactive	:Physiology of Pregnancy Parturition, stages of labor hormonal stimulation of parturition and lactation	Understands the material	2 theoretical + 3 practical	14
Apply and test	Interactive	:Fetal development The newborn - First year after birth - -Aging and death	Understands the material	2 theoretical + 3 practical	15

12. Infrastructure	
1- Required prescribed books	Training bag
2- Main references (sources)	1. Seeleys <i>anatomy and physiology</i> (eleven edition) Cinnamon L. VanPutte , Jennifer L. Regan , and Andrew F. Russo (2017) 2. <i>Essentials of Human Anatomy & Physiology</i> , Global Edition Suzanne Keller Elaine Marieb (2017) 3. <i>Human Anatomy and Physiology</i> , Global Edition [Sep 14, 2015] Erin, C. Amerman 4. Study Guide to Human Anatomy and Physiology 1 (2012) Michael Harrell M.S.

A-Recommended books and references (scientific journals, reports,...)	Pub med
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

13. Course development plan
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General biology course

This course provides an introduction to biological systems within the human body and studies the main components of living cells.

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	General biology course
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	2 theoretical hours + 3 practical hours = 5 hours x 15 weeks = 75 hours
8. Date this description was prepared	2024

9. Course objectives

Acquire basic knowledge and skills in general biology, especially microbiology.

10. Course outcomes and teaching, learning and evaluation methods

A- Cognitive objectives

1. Understanding the academic material
2. Introducing students to the basic and general concepts of biology in general
3. Know the main and important components of medical microbiology.

B - The skills objectives of the course.

1. It involves encouraging students to be creative
2. Creating a spirit of perseverance through continuous encouragement of joint and effective cooperation among them to fulfill their academic requirements.
3. Enabling the student to participate and discuss in preparing research, reports, and group work.

Teaching and learning methods

1. Lectures
2. Video clips

Evaluation methods

1. Written exams every week.
2. Daily oral evaluation.
3. Semester exams.

C. Emotional and evaluation objectives

1. By relating changes at the cell level
2. To brainstorm
3. Using modern teaching methods
4. Practical skills that enable the student to identify all the body's organs

D - General and qualifying transferable skills (other skills related to employability and personal development).

1. Introducing the student to the basic concepts in general and microbiology
2. Introducing the student to the basics of working in the laboratory and methods of working on it

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	The cell	Understands the material	2 theoretical + 3 practical	1
Apply and test	Interactive	PH, salts and ions	Understands material the	2 theoretical + 3 practical	2
Apply and test	Interactive	Lipids and carbohydrates	Understands the material	2 theoretical + 3 practical	3
Apply and test	Interactive	Proteins and nucleic acids	Understands the material	2 theoretical + 3 practical	4
Apply and test	Interactive	Plasma membrane	Understands the material	2 theoretical + 3 practical	5
Apply and test	Interactive	Cytoplasm	Understands the material	2 theoretical + 3 practical	6
Apply and test	Interactive	Mitochondria	Understands the material	2 theoretical + 3 practical	7
Apply and test	Interactive	Eukaryotic cell	Understands the material	2 theoretical + 3 practical	8
Apply and test	Interactive	DNA replication	Understands the material	2 theoretical + 3	9

				practical	
Apply and test	Interactive	DNA translation	Understands the material	2 theoretical + 3 practical	10
Apply and test	Interactive	DNA transcription	Understands the material	2 theoretical + 3 practical	11
Apply and test	Interactive	Meiosis THE	Understands the material	2 theoretical + 3 practical	12
Apply and test	Interactive	THE mitosis	Understands the material	2 theoretical + 3 practical	13
Apply and test	Interactive	Gematogenesis	Understands the material	2 theoretical + 3 practical	14
Apply and test	Interactive	Prokaryotic cell	Understands the material	2 theoretical + 3 practical	15

12. Infrastructure	
1- Required prescribed books	Training bag
2- Main references (sources)	1.Elizabeth o Grady, Jason Cashmore, Marsha, Carol Wismer(2018). Principles of Biology- An introduction to Biological Concepts . second Edition. 2 Peter Raven (2016) Biology. Elven Edition. 3. VJ. Bekish, Yu.T. Nikulin (2006) Practical Book on Medical Biology.
A-Recommended books and references (scientific journals, reports,...)	Pub med

B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University
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13. Course development plan
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General chemistry course

This course provides an introduction to the basic principles of chemistry, how to deal with chemicals, and methods of detecting and separating them.

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	General chemistry course
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	2 theoretical hours + 3 practical hours = 5 hours x 15 weeks = 75 hours
8. Date this description was prepared	2024

9. Course objectives Acquiring basic knowledge and skills in chemistry.

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives 1. Understanding the academic material 2. Introducing the student to the basic concepts in chemistry
B - The skills objectives of the course. Introducing the student to the basics of working in the laboratory.
Teaching and learning methods
1. Lectures 2. Video clips
Evaluation methods
1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
C. Emotional and evaluation objectives 1- The seriousness and continuous interest of the professor makes the student attracted to the scientific subject. 2- Continuous follow-up and use of modern means to deliver scientific material to the student. 3- Linking scientific material to life reality is important.
D - General and qualifying transferable skills (other skills related to employability and personal development). 1. Introducing the student to the basic concepts in chemistry 2. Introducing the student to the basics of working in the laboratory

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	The atom	Understands the material	2 theoretical + 3 practical	1
Apply and test	Interactive	liquid mixture	Understands the material	2 theoretical + 3 practical	2
Apply and test	Interactive	quantitative and qualitative analysis	Understands the material	2 theoretical + 3 practical	3
Apply and test	Interactive	molar and normal concentrations	Understands the material	2 theoretical + 3 practical	4
Apply and test	Interactive	acid base	Understands the material	2 theoretical + 3 practical	5
Apply and test	Interactive	oxidation reduction	Understands the material	2 theoretical + 3 practical	6
Apply and test	Interactive	Hydrocarbons	Understands the material	2 theoretical + 3 practical	7
Apply and test	Interactive	alcohols, ketones, aldehydes, carboxylic acid	Understands the material	2 theoretical + 3 practical	8
Apply and test	Interactive	aromatic, carbohydrates	Understands the material	2 theoretical + 3 practical	9
Apply and test	Interactive	Amines	Understands the material	2 theoretical + 3 practical	10
Apply and test	Interactive	introduction to biochemistry	Understands the material	2 theoretical + 3 practical	11
Apply and test	Interactive	biochemistry and nutrition	Understands the material	2 theoretical + 3 practical	12
Apply and test	Interactive	sugars, starches and fibers	Understands the material	2 theoretical + 3 practical	13
Apply and test	Interactive	Isomers	Understands the material	2 theoretical + 3 practical	14
Apply and test	Interactive	electrolytes, electrochemistry	Understands the material	2 theoretical + 3 practical	15

12. Infrastructure	
1- Required prescribed books	Training bag
2- Main references (sources)	1. Solutions for General Chemistry: Principles and Modern Applications 11th Ralph H. Petrucci, F. Geoffrey Herring, Jeffry D. Madura, Carey Bissonnette 2. Solutions for CHEMISTRY: The Molecular Nature of Matter and Change 7th Martin S. Silberberg, Patricia G. Amateis

A-Recommended books and references (scientific journals, reports,...)	Pub med
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

13. Course development plan
The curriculum development plan is based on the following: • Giving the prescribed scientific material and observing and analyzing the students' results • Study feedback from students' comments about vocabulary • Study the practical laboratory notes for the course • Comparing current vocabulary with the vocabulary of corresponding colleges in the field

Human rights course

This course provides human rights topics in terms of the roots of their origin and the developments that these human rights have witnessed throughout the ages and human societies.

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	Human rights course
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	1 theoretical hours x 15 weeks = 15 hours
8. Date this description was prepared	2024
9. Course objectives Teaching the student the topics of human rights in terms of the roots of their origin and the developments witnessed by these human rights throughout the ages and human societies and the contribution of divine laws, religions and civilizations in providing them with values and ideals, passing through the various medieval, modern and contemporary eras, dealing with schools, political and intellectual doctrines and revolutions, with a focus on the recognition of human rights in our contemporary history.	

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives 1. Understanding the academic material 2. Informing the student about the roots of human rights and the developments they have witnessed throughout different eras 3. Providing the student with the moral values that require adherence to and clarifying the most important rights entrusted to the individual
B - The skills objectives of the course. 1. The student acquires the knowledge and skills to defend his basic rights and freedoms guaranteed by constitutional and legal legislation and international conventions. 2. Spreading a culture of human rights within society and the place in which it works. 3. How to preserve society and the country by enhancing the country's love for

them. 4. Promoting citizenship among university students.
Teaching and learning methods
1. Lectures 2. Video clips
Evaluation methods
1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
C. Emotional and evaluation objectives 1. Teaching students to search for realistic problems and link them to scientific material. 2. Urging students to be objective in discussions about the challenges facing the country. 3. Embodying the concept of freedom among students and clarifying wrong practices and how to avoid them.
D - General and qualifying transferable skills (other skills related to employability and personal development). 1. Introducing the student to the basic concepts in human rights. 2. Adopting diplomacy and flexibility in dealing. 3. The ability to adapt and communicate with others.

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	The roots of human rights and their development in human history	Understands the material	1	1
Apply and test	Interactive	Human rights in ancient civilizations and divine laws	Understands the material	1	2
Apply and test	Interactive	Human rights in religions and divine laws	Understands the material	1	3
Apply and test	Interactive	Human rights in the Middle and Modern Ages	Understands the material	1	4
Apply and test	Interactive	Contemporary recognition of human rights	Understands the material	1	5
Apply and test	Interactive	Contemporary regional recognition	Understands the material	1	6
Apply and test	Interactive	The emergence of non-governmental organizations and their role in the fields of human rights	Understands the material	1	7
Apply and test	Interactive	Contents of human rights and gender rights in international and regional conventions and national legislation	Understands the material	1	8
Apply and test	Interactive	Forms and generations of human rights	Understands the material	1	9
Apply and test	Interactive	Human rights guarantees and protection	Understands the material	1	10
Apply and test	Interactive	Human rights guarantees and protection at the national level	Understands the material	1	11
Apply and test	Interactive	Constitutional, judicial and political guarantees	Understands the material	1	12
Apply and test	Interactive	The role of national non-governmental organizations	Understands the material	1	13
Apply and test	Interactive	Human rights guarantees and protection at the regional and international levels	Understands the material	1	14
Apply and test	Interactive	The role of non-governmental organizations at the regional and international levels	Understands the material	1	15

12. Infrastructure	
1- Required prescribed books	Human rights and their development - their implications - their protection Professor Dr. Riad Aziz Hadi

2- Main references (sources)	1.The Constitution of the Republic of Iraq 2. The main regulations of the human rights organization
A-Recommended books and references (scientific journals, reports,...)	Human Rights Organization reports
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

13. Course development plan
The curriculum development plan is based on the following: • Giving the prescribed scientific material and observing and analyzing the students' results • Study feedback from students' comments about vocabulary • Study the practical laboratory notes for the course • Comparing current vocabulary with the vocabulary of corresponding colleges in the field

English language course

This course provides the study of English grammar with the aim of developing students' linguistic skills.

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	English language
5. Available forms of attendance	%100
6. Annual/ courses	Courses

7. Number of study hours (total)	1 theoretical hours x 15 weeks = 15 hours
8. Date this description was prepared	2024
9. Course objectives This Course aims to study English grammar with the aim of developing students' linguistic skills, refining their skills, and increasing their linguistic communication skills.	

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives This course follows a clear grammatical and functional approach, and there is a coherent sequence of skills development. The course provides opportunities for students to expand their knowledge of the English language and become more fluent users of the language
B - The skills objectives of the course. The course aims to teach non-departmental university students how to communicate with English as a foreign language at the college level and focuses on reading and writing skills, in addition to training them on how to write correct sentences by teaching them English grammar.
Teaching and learning methods
1. Lectures 2. Video clips
Evaluation methods
1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
C. Emotional and evaluation objectives 1. Teaching students to break the psychological barrier and speak the English language. 2. Urging students to have conversations in English among themselves. 3. Urging students to write scientific reports in English using the correct grammar.

D - General and qualifying transferable skills (other skills related to employability and personal development).

1. Preparing radiology technicians who have sufficient information about the English language as a secondary language
2. Adopting the correct rules for pronouncing and writing sentences in English
3. The ability to adapt and communicate with others using the English language

11. Course structure

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	How to introduce people	Understands the material	1	1
Apply and test	Interactive	Your World	Understands the material	1	2
Apply and test	Interactive	Exercises	Understands the material	1	3
Apply and test	Interactive	All about you	Understands the material	1	4
Apply and test	Interactive	Exercises	Understands the material	1	5
Apply and test	Interactive	Family and friends	Understands the material	1	6
Apply and test	Interactive	Exercises	Understands the material	1	7
Apply and test	Interactive	The Way I live	Understands the material	1	8
Apply and test	Interactive	Every day	Understands the material	1	9
Apply and test	Interactive	Exercises	Understands the material	1	10
Apply and test	Interactive	My favourites	Understands the material	1	11
Apply and test	Interactive	Exercises	Understands the material	1	12
Apply and test	Interactive	Exercises	Understands the material	1	13
Apply and test	Interactive	Exercises	Understands the material	1	14
Apply and test	Interactive	Exercises	Understands the material	1	15

12. Infrastructure

1- Required prescribed books	Human rights and their development - their implications - their protection
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	Professor Dr. Riad Aziz Hadi
2- Main references (sources)	New Headway Plus John and Liz Soars g
A-Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

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Fundamentals Computer1 course

This course provides a study of Fundamentals Computer, the concept of the computer, and the phases of the computer life cycle

1. Educational institution	Al-Ayen Iraqi University
2. College name	College of Health and Medical Technologies
3. Scientific department/center	Department of Radiology Technologies
4. Course name/code	Fundamentals Computer1
5. Available forms of attendance	%100
6. Annual/ courses	Courses
7. Number of study hours (total)	1 theoretical hours + 2 practical hours = 3 hours x 15 weeks = 45 hours
8. Date this description was prepared	2024
9. Course objectives Providing the student with the skills of dealing with basic office applications and creating office files and documents. The use of the operating system as well as the basics of working within the digital environment.	

10. Course outcomes and teaching, learning and evaluation methods
A- Cognitive objectives 1. Introducing the student to basic office applications and creating files and documents 2. Teaching the student computer skills 3. Understanding the academic material
B - The skills objectives of the course. Providing the student with knowledge in managing and using various computer applications.

Teaching and learning methods
1. Lectures 2. Video clips
Evaluation methods
1. Written exams every week. 2. Daily oral evaluation. 3. Semester exams.
D - General and qualifying transferable skills (other skills related to employability and personal development). 1- Defining the demand for the basic concepts of the computer concept 2-Introducing the student to the basic vocabulary of the computer 3- Introducing the student to the stages of the computer life cycle

11. Course structure					
Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Apply and test	Interactive	Computer Fundamentals Computer concept, cycle stages	Understands the material	1 theoretical + 2 practical	1
Apply and test	Interactive	Computer life, development of computer generations	Understands the material	1 theoretical + 2 practical	2
Apply and test	Interactive	Classification of computer advantages and areas of use	Understands the material	1 theoretical + 2 practical	3
Apply and test	Interactive	Computer in terms of purpose, size and type of data	Understands the material	1 theoretical + 2 practical	4
Apply and test	Interactive	Computer's components	Understands the material	1 theoretical + 2 practical	5
Apply and test	Interactive	Computer Components Components	Understands the material	1 theoretical + 2 practical	6
Apply and test	Interactive	Computer The physical parts of a computer are entities	Understands the material	1 theoretical + 2 practical	7
Apply and test	Interactive	Software	Understands the material	1 theoretical + 2 practical	8
Apply and test	Interactive	Your personal computer, computer security concept and licenses	Understands the material	1 theoretical + 2 practical	9
Apply and test	Interactive	Programs	Understands the material	1 theoretical + 2 practical	10
Apply and test	Interactive	Computer security and software licenses	Understands the material	1 theoretical + 2 practical	11
Apply and test	Interactive	Computer Safety & Software Licenses	Understands the material	1 theoretical + 2 practical	12
Apply and test	Interactive	Ethics of the electronic world, forms of abuse, security	Understands the material	1 theoretical + 2 practical	13
Apply and test	Interactive	Computer, computer privacy	Understands the material	1 theoretical + 2 practical	14
Apply and test	Interactive	Computer software licenses and their types, intellectual property,	Understands the material	1 theoretical + 2 practical	15

12. Infrastructure	
1- Required prescribed books	Training bag
2- Main references (sources)	Computer basics and office applications (Part One)
A-Recommended books and references (scientific journals, reports,...)	
B - Electronic references, Internet sites...	The official website of Al-Ayen Iraqi University

13. Course development plan

The curriculum development plan is based on the following:

- Giving the prescribed scientific material and observing and analyzing the students' results
- Study feedback from students' comments about vocabulary
- Study the practical laboratory notes for the course
- Comparing current vocabulary with the vocabulary of corresponding colleges in the field