Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2027/2026

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

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

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University name : AL-Furat AL-Awsat Technical Uuniversity

Faculty / Institute : AL-Qadisiyah Polytechnic College

Scientific Department : Radiolpgy & Sonography Techniques

Academic or Professional Program Name : Radiology & Sonography

Techniques Final Certificate Name : Diploma in Radiology & sanar Techniques

Academic System : Semesters

Description Preparation Date : 28 /9/2026

File Completion Date : 28/9/2026

Signature :

Head of Department Name:

Asist.Prof.Afrah A.Habeeb

Date : 4/10/2026

Signature :

Scientific Associate Name

Prof.Dr.Khudair Majeed

Date 4/10/2026

This file is checked by :

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department

Asist.Lact. Adnan Hamid

Date :

Signature :

Approval of the Dean

Prof. Dr.Zaki Muhammad Abbas

Date :

Signature

1. **Program Vision**
Upgrading the level of health services to cover the needs of the medical labor market in our beloved country and advancing the scientific research process to keep pace with modern scientific progress
2. **Program Mission**
Providing science and special medical diagnostic knowledge through educating and training distinguished national medical cadres that harness what they have gained from radiological techniques to serve the people of society in a healthy way.
3. **Program Objectives**
The aim of the academic educational program : Preparing photographers with a diploma in radiology technicians who are qualified in the field of radiography to work in government and private health institutions, taking into account the task of preparing graduates well by providing them with the information, skills and behaviors necessary to perform the radiology technician job, according to a program prepared with curricula and field practice. The importance of this specialization is due to the fact that diagnostic radiology is the first and most important step in treating patients .
4. **Program Accreditation**
JRCERT

5. **Other external influences**
The ministry of Health +The X-ray Institute

6. **Program Structure**				
Program Structure	**Number of**	**Credit hours**	**Percentage**	**Reviews***

	Courses			
Institution Requirements	3	6		general
College Requirements	1	4		asistant
Department Requirements	4	20		specific
Summer Training		2 month		specific
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
First Stage/First Semester		**Principle Radiological Equipment Techniques**	2	4
		Principle Radiological Equipment Techniques	2	3
		Physics Radiation	2	3
		Anatomy	2	3
		Medical Biology		
		English Language	2	–
		Principle of computer1	1	2
		Human rights and democracy	2	–

8. Teaching and Learning Strategies

1-Laboratory practice
2- Methodological training in hospitals and X-rays institute.
3- Off-study (Summer) training.
4-Making reports and seminars.

9. Evaluation methods

1- Theoretical and practical exams (semi-final).

2- Oral tests.
3- Daily estimation.
4- Non-class activity.
5- Final exam.

10. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
	1	5			6	3

Professional Development

Mentoring new faculty members

Successful mentoring relationships go through four phases: preparation, negotiating, enabling growth, and closure. These sequential phases build on each other and vary in length. In each phase, there are specific steps and strategies that lead to mentoring excellence .

Professional development of faculty members

Assess the professional development needs of your faculty and institution. Identify evidence-based approaches faculty developers use to deliver services. Design successful learning communities, institutes, and workshops. Develop your instructional consultation skills in group and individual settings.

11. Acceptance Criterion

1- Student's general average at high school.
2- Preference of students.
3- The feasible capacity of X-ray department.

12. The most important sources of information about the program

1- Curriculum books.
2- Updating syllabuses according to accredited global syllabuses.
3- Searching through the Internet to obtain the most recent scientific information

13. Program Development Plan

Radiology&sonography Techniques First Stage (First Semester)

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First Stage /First Semester		Principle radiological Equipment Techniques	Basic	+	+	+	+	+	+	+	+	+	+	+	+
		Principle Radiological Equipment Techniques	Basic	+	+	+	+	+	+	+	+	+	+	+	+
		Physics Radiation	Basic	+	+	+	+	+	+	+	+	+	+	+	+
		Anatomy	assistant	+	+	+	+	+	+	+	+	+	+	+	+
		Medical Biology	assistant	+	+	+	+	+	+	+	+	+	+	+	+
		English Language	general	+	+	+	+	+	+	+	+	+	+	+	+
		Principle of computer1	general	+	+	+	+	+	+	+	+	+	+	+	+
		Human rights and democracy	general	+	+	+	+	+	+	+	+	+	+	+	+

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Appendicular skeleton Radiography
2. Course Code:
3. Semester / Year:
1ST semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
90 hours
7. Course administrator's name (mention all, if more than one name)
Name: Mohammed Falah Fahum Email:

8. Course Objectives

Course Objectives	**1-The student learns how to perform the radiography examination.** **2-The student learns the Radiography processing and it stages.** **3-The necessary cases must be taken in the equipage and treatment of the patient.**

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6	Student can learned verteb column	Preliminary steps in radiography, body planes, body movement and	Lecture, discussion And scientific films	Oral tests

			body parts.		
2	6	Student will be learned the positions of atlas and axis	Positioning terms and radiographic positions	Lecture, discussion And scientific films	Daily examination
3	6	Student will learned the Positions cerv vertebrae	Radiographic positions of the upper extremities (limbs), general notes and radiographic positions of the digits, hand and thumb.	Lecture, discussion And scientific films	Daily examination
4	6	Student will learned the positions of the w joint	Radiographic positions of the wrist joint	Lecture, discussion And scientific films	Daily examination
5	6	Student will learned the positions of the forearm	Radiographic positions of the forearm	Lecture, discussion And scientific films	Daily examination
6	6	Student will learned the positions of the elbow joint	Radiographic positions of the elbow joint	Lecture, discussion And scientific films	Daily examination
7	6	Student will learned the positions of the olecranon process and distal humerus	Radiographic positions of the olecranon process and distal humerus	Lecture, discussion And scientific films	Daily examination
8	6	Student will learned the positions of the humerus	Radiographic positions of the humerus	Lecture, discussion And scientific films	Daily examination
9	6	Student will learned the positions of the shoulder joint.	Radiographic positions of the shoulder joint.	Lecture, discussion And scien films	Daily examination
10	6	Student will	Radiographic positic	Lecture,	Daily

		learned the positions of the lower extremities, foot and toes.	of the lov extremities, foot a toes.	discussion And scientific films	examination
11	6	Student will learned the position of the ankle joint and calcaneus bone	Radiographic position of the ankle joint and calcaneus bone	Lecture, discussion And scientific films	Daily examination
12	6	Student will learned the positions of the leg.	Radiographic positions of the leg.	Lecture, discussion And scientific films	Daily examination
13	6	Student will learned the positions of the knee joint, patella , inter condyle fossa	Radiographic positions of the knee joint, patella , inter condyle fossa	Lecture, discussion And scientific films	Daily examination
14	6	Student will learned the positions of the femur .	Radiographic positions of the femur	Lecture, discussion And scientific films	Daily examination
15	6	Student will learned the positions of the hip joint and pelvis .	Radiographic positions of the hip joint and pelvis	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Philip W. Ballinger; Merrill's Atlas of radiographic positions and radiological procedures. Ninth Edition, 2005, Mosby-Year Book, Inc .
Main references (sources)	Frances Aitchison; Chapman & Nakielny, A guide to radiological procedures. Fifth Edition, 2009. Saunders Elsevier .
Recommended books and references (scientific journals, reports…)	The Royal College of radiologists (2005) Standards for intravenous Iodinated contrast Administration to Adult Patients. London: The Royal College of radiologists

Electronic References, Websites	1-European Society of Urogenital Radiology Contrast Media Safety Committee (2007) ESUR guidelines on contrast media version 6.0. www.esur.org. 2- Schoepf, U.J., Zwerner, P.I., Savino, G., et (2007) Coronary CT

Course Description Form

1. Course Name:
Principle Radiological Equipment Techniques
2. Course Code:
3. Semester / Year:
1ST semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours
7. Course administrator's name (mention all, if more than one name)
Name: Dr.Ameer Abdulksum odaa e-mail :ameer.odaa.idi4@atu.edu.iq
8. Course Objectives

Course Objectives	**1- The x- ray machine parts and and.** **2- How the x- ray machine parts work** **3- The x- ray machine parts maintenances**

9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	5	Student can learned History of X-ray and Properties	**History of X-ray and Properties the X-ray Machine parts.**	Lecture, discussion And scienti films	Oral tests
2	5	Student will be learned the X-ray Machine parts	**the X-ray Machine parts**	Lecture, discussion And scient films	Daily examination
3	5	Student will learned the **Operating Console**	**Operating Console**	Lecture, discussion And scientific filn	Daily examination
4	5	Student will learned the ***KVp Adjustment***	***KVp Adjustment***	Lecture, discussion And scientific filn	Daily examination
5	5	Student will learned the Tube Current (mA)	Tube Current (mA)	Lecture, discussion And scient films	Daily examination
6	5	Student will learned the ***Milliampere-seconds (mAs)***	***Milliampere-seconds (mAs)***	Lecture, discussion And scient films	Daily examination
7	5	Student will learned the ***High voltage transformer, voltage rectifications***	***High voltage transformer, voltage rectifications***	Lecture, discussion And scient films	Daily examination
8	5	Student will learned the ***Three-Phase X-Ray Generator, High-Frequency Generator***	***Three-Phase X-Ray Generator, High-Frequency Generator***	Lecture, discussion And scient films	Daily examination
9	5	Student will learned the The grid: effect of scattered radiation on the contrast	The grid: effect of scattered radiation on the contrast	Lecture, discussion And scient films	Daily examination
10	5	Student will learned the ***Charactersticics of grid construction and Grid Types*** .	***Charactersticics of grid construction and Grid Types***	Lecture, discussion And scient films	Daily examination
11	5	Student will learned the ***Cassette: intensifying screens, x-ray film and***	***Cassette: intensifying screens, x-ray film and formation of latent image***	Lecture, discussion And scient films	Daily examination

		formation of latent image .			
12	5	Student will learned the **The X-ray imaging ystem**	**The X-ray imaging system**	Lecture, discussion And scient films	Daily examination
13	5	Student will learned the **X-Ray Film and Film Processing**	**X-Ray Film and Film Processing**	Lecture, discussion And scient films	Daily examination
14	5	Student will learned the ***Image quality***	***Image quality***	Lecture, discussion And scient films	Daily examination
15	5	Student will learned the ***Exposure Timer & checking a timer*** .	***Exposure Timer & checking a timer***	Lecture, discussion And scient films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1- Essentials of Dental Radiography and Radiology , Eric Whaites , for word by R.A. Cawson , 2016** **2-ESSENTIAI PHYSICS IN IMAGING FOR RADIOGRAPHERS , Ken Holmes Marcus Elkingtion and** Phil Harris ,2019 **3- Radiology PHY , D.A.SAIA, 2018** **4- Radiographic Imaging and Exposure , TERRIL. FAUBER , 2020** **5-X-RAY diffraction , Structure , principles and Applications , Kaimin Shih ,2020 .** **6- DANCE, D. R., et al. Diagnostic radiology physics: A handbook for teachers and students. Endorsed by: American Association of Physicists in Medicine, Asia-Oceania Federation of Organizations** **for Medical Physics, European Federation of Organisations for Medical Physics. 2014.**
Main references (sources)	**- DANCE, D. R., et al. Diagnostic radiology physics: A handbook for teachers and students. Endorsed by: American Association of Physicists in Medicine, Asia-Oceania Federation of Organizations** **for Medical Physics, European Federation of Organisations for Medical Physics. 2014.**

Recommended books and references (scientific journals, reports…)	**Essentials of Dental Radiography and Radiology , Eric Whaites , for word by R.A. Cawson , 2016**
Electronic References, Websites	**X-RAY diffraction , Structure , principles and Applications , Kaimin Shih ,2020 .**

Course Description Form

1. Course Name:	
Physics Radiation	
2. Course Code:	
3. Semester / Year:	
1ST semester , first stage	
4. Description Preparation Date:	
28/9/2026	
5. Available Attendance Forms:	
Theoretical and practical	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Anwar Najum Email: anwar.ali.idi3@atu.edu.iq	
8. Course Objectives	
Course Objectives	**The student should be able at the end of the Semester to know the following: -** **1- Types of electromagnetic waves and the most important experiments conducted in this field** **2- Characteristics of x-rays and types of tubes that are used to generate these x-rays** **3- Electrical circuit for generating diagnostic x-rays .**
9. Teaching and Learning Strategies	

Strategy	1- Multiple teaching methods will be used (lecture, discussion, surveying, etc.) 2- Illustrative and practical examples will be used to enrich the learning material - 3- Illustrations will be used or science films will be shown 4- Multiple teaching methods will be used (lecture, discussion, surveying, etc.) 5- Illustrative and practical examples will be used to enrich the learning material - 6- Illustrations will be used or science films will be shown

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Student can learned Electricity - Coulomb's law- electric field .	Electricity - Coulomb's law- electric field	Lecture, discussion And scientific films	Oral tests
2	5	Student will be learned The meaning of magnetism and magnetization - Classification of magnetic materials	The meaning of magnetism and magnetization - Classification of magnetic materials	Lecture, discussion And scien films	Daily examination
3	5	Student will learned the Laws of magnetism - magnetic flux - magnetic field	Laws of magnetism - magnetic flux - magnetic field	Lecture, discussion And scien films	Daily examination
4	5	Student will learned the problems to solve	problems to solve	Lecture, discussion And scien films	Daily examination
5	5	Student will learned the Induced emf	Induced emf	Lecture, discussion And scien films	Daily examination
6	5	Student will learned the Electromagnetic waves	Electromagnetic waves	Lecture, discussion And scien films	Daily examination
7	5	Student will learned the History of X-rays .	History of X-rays	Lecture, discussion And scien films	Daily examination
8	5	Student will learned the Measurement of the intensity of X-rays	Measurement of the intensity of X-rays	Lecture, discussion And scien films	Daily examination
9	5	Student will	X-ray spectrum -	Lecture, discussion	Daily

		learned the X-ray pectrum - X-ray absorption	X-ray absorption	And scien films	examination
10	5	Student will learned the X-ray properties- X-ray scattering- Compton effect .	X-ray properties- X-ray scattering- Compton effect	Lecture, discussion And scien films	Daily examination
11	5	Student will learned the Photoelectric effect .	Photoelectric effect	Lecture, discussion And scien films	Daily examination
12	5	Student will learned the problems to solve	problems to solve	Lecture, discussion And scien films	Daily examination
13	5	Student will learned the X-ray production - X-ray tube	X-ray production - X-ray tube	Lecture, discussion And scien films	Daily examination
14	5	Student will learned the The electrical circuit of the x-ray tube	The electrical circuit of the x-ray tube	Lecture, discussion And scien films	Daily examination
15	5	Student will learned the Improving radiation quality - using a fixed-moving grid .	Improving radiation quality - using a fixed-moving grid	Lecture, discussion And scien films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1-Ervin B. Podgoršak "Radiation physics for medical physicists" Third Edition published by Springer Nature 2016
Recommended books and references (scientific journals, reports…)	1- Claude Leroy, pier-Giorgio Rancoita "principle of radiation interaction in matter and detection "2nd edition Published by World Scientific Publishing Co. Pte. Ltd. 2009. 2- Edward M. Purcell, David J. Morin "Electricity and magnetism" Third edition Published in the United States of America by Cambridge University Press, New York 2013. 3- S. Christofides, D.R. Dance, A.D.A. Maidm ent, I.D. McLean and K. – H. Ng "Diagnostic radiology physics "Printed by the IAEA in

	Austria 2014.
Electronic References, Websites	1- Claude Leroy, pier-Giorgio Rancoita "principle of radiation interaction in matter and detection "2nd edition Published by World Scientific Publishing Co. Pte. Ltd. 2009. 2- Edward M. Purcell, David J. Morin "Electric and magnetism" Third edition Published in United States of America by Cambridge Univers Press, New York 2013.

Course Description Form

1. Course Name:	
Anatomy	
2. Course Code:	
3. Semester / Year:	
1ST semester , first stage	
4. Description Preparation Date:	
28/9/2026	
5. Available Attendance Forms:	
Theoretical and practical	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Maysam Hassan Hilal Email: maysam.hilal@atu.edu.iq	
8. Course Objectives	
Course Objectives	1- To learn different parts of body. 2- To learn the sites of internal organs anatomically .
9. Teaching and Learning Strategies	

Strategy	1 -Lectures 2 -Practical training 3 -Whiteboard 4 -Educational posters 5 -Show educational videos 6- Three-dimensional models of the structural anatomy of various body organs

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Student can learned **Definition of anatomy, branches of anatomy Organization and General Plan of the Body** -Terminology and General Plan of the Body (Body Parts and Areas Terms of Location and Position) -Body Cavities and Their MembranesDorsal cavity,Ventral cavity) -Planes and Sections of the Body -Areas of the Abdomen	**Definition of anatomy, branches of anatomy Organization and General Plan of the Body** -Terminology and General Plan of the Body (Body Parts and Areas. Terms of Location and Position) -Body Cavities and Their Membranes (Dorsal cavity,Ventral cavity) -Planes and Sections of the Body -Areas of the Abdomen	Lecture, discussion And scientific films	Oral tests
2,3&4	5	Student will be learned The **Types of cells and tissues in the body and their locations -Epithelial Tissue** (Simple Squamous Epithelium, Stratified Squamous Epithelium, Transitional Epithelium,	**Types of cells and tissues in the body and their locations -Epithelial Tissue** (Simple Squamous Epithelium, Stratified Squamous Epithelium, Transitional Epithelium, Simple Cuboidal Epithelium, Simple Columnar Epithelium Ciliated Epithelium, Glands (Unicellular glands, Multicellular glands).	Lecture, discussion And scientific films	Daily examination

		Simple Cuboidal Epithelium, Simple Columnar Epithelium Ciliated Epithelium, Glands (Unicellular glands, Multicellular glands).			
5&6	5	Student will learned the **The Skeletal System** **-Types of Bone Tissue, Classification of Bones.** **-parts of the skeletal system** (Skull, Vertebral Column, Rib Cage, The Shoulder and Arm, The Hip and Leg) **Joints—Articulations** (The Classification of Joints, Synovial Joints	**The Skeletal System** **-Types of Bone Tissue, Classification of Bones.** **-parts of the skeletal system** (Skull, Vertebral Column, Rib Cage, The Shoulder and Arm, The Hip and Leg) **Joints—Articulations** (The Classification of Joints, Synovial Joints	Lecture, discussion And scientific films	Daily examination
7,8,9& 10	5	Student will learnped the **The Muscular System** **-Major Muscles of the Body** (Muscles of the Head and Neck, Muscles of the Trunk Muscles of the Shoulder and Arm, Muscles of the Hip and Leg). **Cardiovascular and lymphatic system** **-The heart** (**Location and Pericardial Membranes,**	1 The Muscular System 2-Practical training 3 -White board 4-Educational posters 5 -Show educational videos 6- Three-dimensional models of the structural **Cardiovascular and lymphatic system** **-The heart (Location and Pericardial Membranes, Chambers, Vessels and Valves of** (Right Atrium, Left Atrium, Right Ventricle, Left Ventricle), Coronary Vessels	1-Observation 2- discussion 3- The stu And cumulativ scientific 4- The wr films	Daily examination 3- The student's cumulative recor 4- The written exam

		Chambers, Vessels and Valves of (Right Atrium, Left Atrium, Right Ventricle, Left Ventricle), Coronary Vessels -Anatomical locations of the major arteries and veins in the body -The anatomical location and composition of the parts of the lymphatic system (lymph vessels, lymphatic organs, lymph node	-Anatomical locations of the major arteries and veins in the body -The anatomical location and composition of the parts of the lymphatic system (lymph vessels, lymphatic organs, lymph nodes		
11&12	5	Student will learned the **The Nervous System** **-Nervous System Divisions** **-Types of Neurons** -Anatomical location of the brain and its divisions -The anatom location and struct of the spinal cord the nerves that bra from it	**The Nervous System** **-Nervous System Divisions** **-Types of Neurons** -Anatomical location of the brain and its divisions -The anatomical location structure of the spinal c and the nerves that bra from	Lecture, discussion And scientific filn	Daily examination
13	5	Student will learned the **The Respiratory System** **-Divisions of the Respiratory System and its anatomical locations (** Nose and Nasal Cavities ,Pharynx, Larynx, Trachea and Bronchial Tree, Lungs and Pleural Membranes,	**The Respiratory System** **-Divisions of Respiratory System and anatomical locations (** N and Nasal Cavities ,Phary Larynx, Trachea Bronchial Tree, Lungs Pleural Membranes, Alvec	Lecture, discussion And scientific films	Daily examination

		Alveoli			
14	5	Student will learned the **The Digestive System -Divisions of the Digestive System and its anatomical locations -Oral Cavity** (Teeth, Tongue, Salivary Glands) **-Pharynx -Esophagus -Structural Layers of .**	**The Digestive System -Divisions of the Digestive System and its anatomical locations -Oral Cavity** (Teeth, Tongue, Salivary Glands) **-Pharynx -Esophagus -Structural Lay of the Alimentary Tube** (Mucosa, Submucosa, External Muscle Layer, Serosa)	Lecture, discussion And scientific films	Daily examination
15	5	Student will learned the **The Urinary System -Structures of The Urinary System and their anatomical locations (Kidneys, ureters, bladder, urethra) -The Reproductive Systems: -Structures of the male reproductive and their anatomical locations** (Testes, Epididymis, Ductus Deferens, Ejaculatory Ducts, Seminal Vesicles, Prostate Gland, Bulbourethral Glands, Urethra-Penis. **-Structures of Fem Reproductive Syst and their anatom locations** (Ovar Fallopian Tul Uterus, Vag Mammary Glands)	**The Urinary System -Structures of The Urinary System and their anatomical locations (Kidneys, ureters, bladder, urethra) -The Reproductive Systems: -Structures of the male reproductive and their anatomical locations** (Testes, Epididymis, Ductus Deferens, Ejaculatory Ducts, Seminal Vesicles, Prostate Gland, Bulbourethral Glands, Urethra-Penis. **-Structures of Fem Reproductive System a their anatomical locati** (Ovaries, Fallopian Tul Uterus, Vagina, Mamm Glands)	Lecture, discussion And scientific films	Daily examination
11. Course Evaluation					

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	branch, m. o. (2005). prehospital emergency care. UK: ✓ Queens. F., B. K. (2016). first aid emergency medicine. ✓ Cenveo. S., D. W. (2000). Primary trauma care manual. UK: North house
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Medical Biology
2. Course Code:
3. Semester / Year:
1ST semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours
7. Course administrator's name (mention all, if more than one name)

Name: Hussein subah
Email:Hussein.sabah.idi16@atu.edu.iq

8. Course Objectives

Course Objectives	***Distinguish between types of cells and their structures.** ***Compares between plant and animal cells.** *** Recognize the components of bacterial cell division and how it occurs.** *** Recognize the pathogen to humans.**

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Student can learned History of biosafety, microbiology and molecular biology ,Biosafety levels, Personal protective equipments , Laboratory facilities and safety equipment,	**History of biosafety, microbiology and molecular biology ,Biosafety levels, Personal protective equipments , Laboratory facilities and safety equipment,**	Lecture, discussion And scientific films	Oral tests
2	5	Student will be learned the Introduction of biology: Definition of biology, Branches of biology	**Introduction of biology: Definition of biology, Branches of biology**	Lecture, discussion And scient films	Daily examination
3	5	Student will learned the The cell: Types of cells, Prokaryote cell, Eukaryote cell,Differentiation between prokaryote and eukaryote cell	**The cell: Types of cells, Prokaryote cell, Eukaryote cell,Differentiation between prokaryote and eukaryote cell**	Lecture, discussion And scient films	Daily examination
4	5	Student will learned the	**Prokaryote cell:**	Lecture,	Daily

		Prokaryote cell: Bacteria cell, Types of bacteria, structur bacteria	**Bacteria cell, Types of bacteria, structure bacteria**	discussion And scient films	examination
5	5	Student will learned the Formal appearance of bacteria, shape-size, Metabolic events-Growth carv	**Formal appearance of bacteria, shape-size, Metabolic events-Growth carve.**	Lecture, discussion And scient films	Daily examination
6	5	Student will learned the Infection: Types of infection, sources of infection. Methods of transmition of infection.	**Infection: Types of infection, sources of infection. Methods of transmition of infection.**	Lecture, discussion And scient films	Daily examination
7	5	Student will learned the Sterilization and disinfection	**Sterilization and disinfection**	Lecture, discussion And scient films	Daily examination
8	5	Student will learned the Animal cell: The internal structure of animal cell: Cell wall, cytoplasm, nucleus mitochondria.	**Animal cell: The internal structure of animal cell: Cell wall, cytoplasm, nucleus mitochondria.**	Lecture, discussion And scient films	Daily examination
9	5	Student will learned the Ribosomes, Endoplasmic reticulum: types of Endoplasmic reticulum: Rough and smooth	**Ribosomes, Endoplasmic reticulum: types of Endoplasmic reticulum: Rough and smooth**	Lecture, discussion And scient films	Daily examination
10	5	Student will learned the Golgi apparatus, Ribosomes	**Golgi apparatus, Ribosomes**	Lecture, discussion And scient films	Daily examination
11	5	Student will learned the Types of animal cell, forms – size: Squamous shape, Cuboidal shape, Columnar shape. .	**Types of animal cell, forms – size: Squamous shape, Cuboidal shape, Columnar shape**	Lecture, discussion And scient films	Daily examination
12	5	Student will learned the Spindale shape, Irregular Shape, Spherical shape, Oval shape	**Spindale shape, Irregular Shape, Spherical shape, Oval shape**	Lecture, discussion And scient films	Daily examination

13	5	Student will learned the Types of animal tissues: Epithelial tissue Connective tissue	**Types of animal tissues: Epithelial tissue Connective tissue**	Lecture, discussion And scient films	Daily examination
14	5	Student will learned the Muscle tissue, nervous tissue	**Muscle tissue, nervous tissue**	Lecture, discussion And scient films	Daily examination
15	5	Student will learned the Different between bacterial cell and animal cell. .	**Different between bacterial cell and animal cell.**	Lecture, discussion And scient films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1-- Goodman's.(2020) . Medical Cell Biology . 4th edition 2- Goodman, S.R. ed., 2007. Medical cell biology. Academic Press . 3- Laake, P. and Benestad, H.B., 2015. *Research in medical and biological sciences: From planning and preparation to grant application and publication*. Academic Press.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
English Language
2. Course Code:
3. Semester / Year:
1ST semester , first stage
4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical

6. Number of Credit Hours (Total) / Number of Units (Total)

30 hours

7. Course administrator's name (mention all, if more than one name)

Name: Ali Abdul alhusain
Email: Ali. Abdulalhusain @atu.edu.iq

8. Course Objectives

Course Objectives	**The student will be able to write the medical reports.**

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Student can learned **Chapter One : Medical terminology** Language of medicine Medical terms Spelling of medical terms Pronunciation of med terms .	**Chapter One : Medical terminology Language of medicine Medical terms Spelling of medical terms Pronunciation of medical terms ,**	Lecture, discussion And scienti films	Oral tests
2	2	Student will be learned the **Chapter One :** Focus on reading Vocabulary development Focus on grammar Oral skills	**Chapter One : Focus on reading Vocabulary development Focus on grammar Oral skills**	Lecture, discussion And scient films	Daily examination
3	2	Student will learned the **Chapter One :** Focus on writing Pronunciation exercise Review exercises Self-assessment	**Chapter One : Focus on writing Pronunciation exercise Review exercises Self-assessment**	Lecture, discussion And scient films	Daily examination
4	2	Student will learned the	**Chapter Two : Suffixes**	Lecture, discussion	Daily examination

		Chapter Two : Suffixes Medical terms Suffixes Focus on reading	**Medical terms Suffixes Focus on reading**	And scient films	
5	2	Student will learned the **Chapter Two :** Vocabulary development Focus on grammar Case report Oral communication sk	**Chapter Two : Vocabulary development Focus on grammar Case report Oral communication ski**	Lecture, discussion And scient films	Daily examination
6	2	Student will learned the **Chapter Two :** Focus on writing Pronunciation of medical terms Review exercises Self-assessment .	**Chapter Two : Focus on writing Pronunciation of medical terms Review exercises Self-assessment**	Lecture, discussion And scient films	Daily examination
7	2	Student will learned the **Chapter Three : Prefixes** Medical terms Prefixes Focus on reading	**Chapter Three : Prefixes Medical terms Prefixes Focus on reading**	Lecture, discussion And scient films	Daily examination
8	2	Student will learned the **Chapter Three :** Vocabulary development Focus on grammar Oral ommunication skills Focus on writing .	**Chapter Three : Vocabulary development Focus on grammar Oral communication skills Focus on writing**	Lecture, discussion And scient films	Daily examination
9	2	Student will learned the **Chapter Three :** Pronunciation of medical terms Review exercises Self-assessment	**Chapter Three : Pronunciation of medical terms Review exercises Self-assessment**	Lecture, discussion And scient films	Daily examination
10	2	Student will learned the **Chapter Four : Body structure** Body structure Principal body systems Planes of the body Orientation and directional terms	**Chapter Four : Body structure Body structure Principal body systems Planes of the body Orientation and directional terms**	Lecture, discussion And scient films	Daily examination
11	2	Student will learned the **Chapter Four :** Body positions Body cavities Focus on reading	**Chapter Four : Body positions Body cavities Focus on reading**	Lecture, discussion And scient films	Daily examination

12	2	Student will learned the **Chapter Four :** Oral communication skills Focus on writingReview exercises Self-assessment	**Chapter Four : Oral communication skills Focus on writing Review exercises Self-assessment**	Lecture, discussion And scient films	Daily examination
13	2	Student will learned the **Chapter Five : Body systems** Body systems Focus on reading Vocabulary development	**Chapter Five : Body systems Body systems Focus on reading Vocabulary development**	Lecture, discussion And scient films	Daily examination
14	2	Student will learned the **Chapter Five :** Focus on grammar Oral communication skills Focus on writing	**Chapter Five : Focus on grammar Oral communication skills Focus on writing**	Lecture, discussion And scient films	Daily examination
15	2	Student will learned the **Chapter Five :** Pronunciation of medical terms Review exercises Self-assessment	**Chapter Five : Pronunciation of medical terms Review exercises Self-assessment**	Lecture, discussion And scient films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 30 marks for monthly and daily exams for the first semester. 70 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:

Principle of computer 1

2. Course Code:

3. Semester / Year:

1ST semester , first stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical & practical

6. Number of Credit Hours (Total) / Number of Units (Total)

45 hours

7. Course administrator's name (mention all, if more than one name)

Name: Wassan Mahamed
Email: wassan.najum@atu.edu.iq

8. Course Objectives

Course Objectives	**General goal: To provide 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 .** **Specific objective: To provide the student with knowledge managing and using various computer applications**

9. Teaching and Learning Strategies

Strategy	1-Lectures 2- Practical training 3- Whiteboard 4- Educational posters 5- Show educational videos .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Student can learned Computer Fundamentals, computer concept, phases of the computer life cycle, evelopment of computer generations .	**Computer Fundamentals, computer concept, phases of the computer life cycle, development of computer generations**	Lecture, discussion And scientific films	Oral tests

2	2	Student will be learned the Computer advantages and areas of use. Computer classification in terms of purpose, size and type of data	**Computer advantages and areas of use. Computer classification in terms of purpose, size and type of data**	Lecture, discussion And scient films	Daily examination
3	2	Student will learned the Computer's components .	**Computer's components**	Lecture, discussion And scient films	Daily examination
4	2	Student will learned the Your personal computer, the concept of computer security and software licenses .	**Your personal computer, the concept of computer security and software licenses**	Lecture, discussion And scient films	Daily examination
5	2	Student will learned the Computer security and software licenses .	**Computer security and software licenses**	Lecture, discussion And scient films	Daily examination
6	2	Student will learned the Ethics of the electronic world, forms of abuse, computer security, computer privacy .	**Ethics of the electronic world, forms of abuse, computer security, computer privacy**	Lecture, discussion And scient films	Daily examination
7	2	Student will learned the Computer software licenses and their types, intellectual property, electronic hacking, malicious software, the most important steps necessary to protect against hacking operations, computer harm to health.	**Computer software licenses and their types, intellectual property, electronic hacking, malicious software, the most important steps necessary to protect against hacking operations, computer harm to health.**	Lecture, discussion And scient films	Daily examination

8	2	Student will learned the Operating Systems Definition of operating system, functions, goals, classification, examples of some operating systems	**Operating Systems Definition of operating system, functions, goals, classification, examples of some operating systems**	Lecture, discussion And scient films	Daily examination
9	2	Student will learned the Operating ystems 7 Windows operating system	**Operating Systems 7 Windows operat system**	Lecture, discussion And scient films	Daily examination
10	2	Student will learned the Desktop components Start menu taskbar	**Desktop components Start menu taskbar**	Lecture, discussion And scient films	Daily examination
11	2	Student will learned the Folders and files Icons	**Folders and files Icons**	Lecture, discussion And scient films	Daily examination
12	2	Student will learned the Performing operations on windows desktop backgrounds	**Performing operations on windows desktop backgrounds**	Lecture, discussion And scient films	Daily examination
13	2	Student will learned the Control Panel Windows Control Panel Groups (Category	**Control Panel Windows Control Panel Groups (Category**	Lecture, discussion And scient films	Daily examination
14	2	Student will learned the From the Defragment control panel, organize files inside the computer, install and delete programs	**From the Defragment control panel, organize files inside the computer, install and delete programs**	Lecture, discussion And scient films	Daily examination
15	2	Student will learned the	**Some common conditions and**	Lecture, discussion	Daily examination

		Some common conditions and settings in the computer, managing the printer, setting the time and date, maintaining the initial disks	**settings in the computer, managing the printer, setting the time and date, maintaining the initial disks**	And scient films	

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Source Name : Computer Basics and Office Applications - Part One and Two / Ministry of Higher Education and Scientific Research - Department of Research and Development, 2014 Written by: A.M.D. Ziad Muhammad Abboud, Prof. Dr. Ghassan Hamid Abdel Majeed, M.D. Amir Hussein Murad, M. Bilal Kamal Ahmed
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Human rights and democracy
2. Course Code:
3. Semester / Year:
1ST semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours
7. Course administrator's name (mention all, if more than one name)
Name: Eenas Humza salman Email: Eenas.salman.idi9@atu.edu.iq

8. Course Objectives	
Course Objectives	**Specific objectives: Introducing the student to human rights and democracy, their contents, and the classification of public freedoms.** **General objectives: To enable the student to become familiar w the concept of human rights and their guarantees at the national regional levels**

9. Teaching and Learning Strategies	
Strategy	1-Lectures 2- Practical training 3- Whiteboard 4- Educational posters 5- Show educational videos .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2	Student can learned Human rights - their definition - their goals The historical development of human rights. Human rights in ancient civilizations, especially the Mesopotamian .	**Human rights - their definition - their goals The historical development of human rights. Human rights in ancient civilizations, especially the Mesopotamian**	Lecture, discussion And scientific films	Oral tests
2	2	Student will be learned the Human rights in divine laws, with a focus on human rights in Islam. Whiteboard lecture Discussion	**Human rights in divine laws, with a focus on human rights in Islam. Whiteboard lecture Discussion**	Lecture, discussion And scient films	Daily examination
3	2	Student will learned the Human rights in the Middle and Modern Ages	**Human rights in the Middle and Modern Ages .**	Lecture, discussion And scient films	Daily examination
4	2	Student will learned the Regional recognition of human rights at the European, American, African, Islamic, and Arab levels	**Regional recognition of human rights at the European, American, African, Islamic, and Arab levels**	Lecture, discussion And scient films	Daily examination
5	2	Student will learned the Non-governmental organizations and their role in human rights (International Committee of the Red Cross, Amnesty International, Human Rights Watch, Arab Organization for Human Rights	**Non-governmental organizations and their role in human rights (International Committee of the Red Cross, Amnesty International, Human Rights Watch, Arab Organization for Human Rights**	Lecture, discussion And scient films	Daily examination
6	2	Student will	**Human rights in**	Lecture,	Daily

		learned the Human rights in international and regional conventions and national legislation Human rights in international conventions (the Universal Declaration of Human Rights, the two international covenants on human rights	**international and regional conventions and national legislation Human rights in international conventions (the Universal Declaration of Human Rights, the two international covenants on human rights)**	discussion And scient films	examination
7	2	Student will learned the Human rights in regional charters (European Cultural Charter on Human Rights, the American Convention on Human Rights, the African Charter on Human Rights, the Arab Charter on Human Rights	**Human rights in regional charters (European Cultural Charter on Human Rights, the American Convention on Human Rights, the African Charter on Human Rights, the Arab Charter on Human Rights**	Lecture, discussion And scient films	Daily examination
8	2	Student will learned the Human rights in national legislation (Iraqi Constitution)	**Human rights in national legislation (Iraqi Constitution)**	Lecture, discussion And scient films	Daily examination
9	2	Student will learned the Human rights in national legislation (Iraqi Constitution)	**Human rights in national legislation (Iraqi Constitution)**	Lecture, discussion And scient films	Daily examination
10	2	Student will learned the	**Forms and generations of human rights Forms of human rights (individual rights, collective rights) Generations of human rights (first**	Lecture, discussion And scient films	**1 -Educationa Observation 2 -iew 3 -nt's cumulative record 4 -The written exam** Daily examination

		Forms and generations of human rights Forms of human rights (individual rights, collective rights) Generations of human rights (first generation: civil and political rights, second generation: economic and collective rights, third generation: modern	**generation: civil and political rights, second generation: economic and collective rights, third generation: modern** 1 -Educational videos Observation 2 -The interview 3 -The student's cumulative record 4 -The written exam		
11	2	Student will learned the Human rights guarantees and protection at the national level: constitutional, judicial and political guarantees	**Human rights guarantees and protection at the national level: constitutional, judicial and political guarantees**	Lecture, discussion And scient films	Daily examination
12	2	Student will learned the Human rights guarantees and protection at the regional and international levels (the role of the United Nations, the role of regional organizations) the crime of genocide	**Human rights guarantees and protection at the regional and international levels (the role of the United Nations, the role of regional organizations) the crime of genocide**	Lecture, discussion And scient films	Daily examination
13	2	Student will learned the Classification of public freedoms: (Fundamental and individual freedoms: freedom of security and feeling of reassurance, freedom of coming and going personal	**Classification of public freedoms: (Fundamental and individual freedoms: freedom of security and feeling of reassurance, freedom of coming and going personal freedom)**	Lecture, discussion And scient films	Daily examination

		freedom)			
14	3	Student will learned the Intellectual and cultural freedoms: freedom of opinion, freedom of belief, freedom of education	**Intellectual and cultural freedoms: freedom of opinion, freedom of belief, freedom of education**	Lecture, discussion And scient films	Daily examination
15	3	Student will learned the Freedom of the press, freedom of assembly, freedom of forming associations	**Freedom of the press, freedom of assembly, freedom of forming associations**	Lecture, discussion And scient films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Radiology & Sonography Techniques

First Stage

Second Semester

Course Description Form

1. Course Name:
Radiography of the spine
2. Course Code:
3. Semester / Year:
2ed semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
90 hours
7. Course administrator's name (mention all, if more than one name)
Name: mahamad falah Email:
8. Course Objectives

Course Objectives	**1-The student learns how to perform the radiography examination.** **2-The student learns the Radiography processing and it stages.** **3-The necessary cases must be taken in the equipage and treatm of the patient .**
9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	6	Student can learned Radiographic position of the vertebral column, general notes .	**Radiographic position of the vertebral column, general notes**	Lecture, discussion And scientific ilms	Oral tests
2	6	Student will be learned the Radiographic positions of atlas and axis	**Radiographic positions of atlas and axis**	Lecture, discussion And scientific films	Daily examination
3	6	Student will learned the Radiographic positions of the cervical ertebrae	**Radiographic positions of the cervical vertebrae**	Lecture, discussion And scientific films	Daily examination
4	6	Student will learned the Radiographic positions of the intervertebral foramina	**Radiographic positions of the intervertebral foramina**	Lecture, discussion And scientific films	Daily examination
5	6	Student will learned the Radiographic positions of the cervicothoracic region	**Radiographic positions of the cervicothoracic region**	Lecture, discussion And scientific films	Daily examination
6	6	Student will learned the Radiographic positions of the thoracic ertebrae	**Radiographic positions of the thoracic vertebrae**	Lecture, discussion And scientific films	Daily examination
7	6	Student will learned the Radiographic positions of the lumbar vertebrae.	**Radiographic positions of the lumbar vertebrae.**	Lecture, discussion And scientific films	Daily examination
8	6	Student will learned the Radiographic of lumbar spine .	**Radiographic of lumbar spine**	Lecture, discussion And scientific films	Daily examination
9	6	Student will learned the Radiographic of	**Radiographic of lumbo-sacral**	Lecture, discussion And scientific films	Daily examination

		lumbo-sacral junction .	**junction**		
10	6	Student will learned the Radiographic positions of the sacrum.	**Radiographic positions of the sacrum** 1 -Educational videos Observation 2 -The interview 3 -The student's cumulative record 4 -The written exam	Lecture, discussion And scientific Films	Daily examination
11	6	Student will learned the Radiographic positions of the sacro-iliac joint.	**Radiographic positions of the sacro-iliac joint.**	Lecture, discussion And scientific films	Daily examination
12	6	Student will learned the Radiographic positions of the coccyx .	**Radiographic positions of the coccyx**	Lecture, discussion And scientific films	Daily examination
13	6	Student will learned the Radiographic positions of the coccygeal	**Radiographic positions of the coccygeal**	Lecture, discussion And scientific films	Daily examination
14	6	Student will learned the review	**review**	Lecture, discussion And scientific films	Daily examination
15	6	Student will learned the review	**review**	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Philip W. Ballinger; Merrill's Atlas of radiographic positions and radiological procedures. Ninth Edition, 2005, Mosby-Year Book, Inc .
Main references (sources)	Frances Aitchison; Chapman & Nakielny , A

	guide to radiological procedures. Fifth Edition, 2009. Saunders Elsevier .
Recommended books and references (scientific journals, reports…)	The Royal College of radiologists (2005) Standards for intravenous Iodinated contrast Administration to Adult Patients. London: The Royal College of radiologists.
Electronic References, Websites	1-European Society of Urogenital Radiology Contrast Media Safety Committee (2007) ESUR guidelines on contrast media version 6.0. www.esur.org. 2- Schoepf, U.J., Zwerner, P.I., Savino, G., et al. (2007) Coronary CT angiography: how I do it. Radiology. 3-Positioning in Radiography for K. C. Clark London 1975.

Course Description Form

1. Course Name:
Advance Radiological Equipment .
2. Course Code:
3. Semester / Year:
2ed semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
90 hours
7. Course administrator's name (mention all, if more than one name)
Name: Dr.ameer abdulkasum odaa Email: ameer.odaa.idi4@atu.edu.iq
8. Course Objectives

Course Objectives	**The student learns:** **1- The computed , digital and panoramic radiography machines and how the parts of these machines work and their maintenances.** **2- The dental radiography machine and how its parts works and its maintenance.** **3- Introduction to the Mammography**

9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	6	Student can learned Computed Radiography CR Properties	**Computed Radiography CR Properties**	Lecture, discussion And scientific films	Oral tests
2	6	Student will be learned the Concept of CR system	**Concept of CR system**	Lecture, discussion And scientific films	Daily examination
3	6	Student will learned the Imaging plate	**Imaging plate**	Lecture, discussion And scientific films	Daily examination
4	6	Student will learned the Imaging reading	**Imaging reading**	Lecture, discussion And scientific films	Daily examination
5	6	Student will learned the System operating principles	**System operating principles**	Lecture, discussion And scientific films	Daily examination
6	6	Student will learned the Image recording	**Image recording**	Lecture, discussion And scientific films	Daily examination
7	6	Student will learned the Technical trends of CR system	**Technical trends of CR system**	Lecture, discussion And scientific films	Daily examination
8	6	Student will learned the Digital Radiography DR Properties .	**Digital Radiography DR Properties**	Lecture, discussion And scientific films	Daily examination
9	6	Student will learned the Major components of DR	Major components of DR	Lecture, discussion And scientific films	Daily examination
10	6	Student will learned the Digital Radiography modalities	**Digital Radiography DR modalities**	Lecture, discussion And scientific films	Daily examination

			4 -The written exam		
11	6	Student will learned the Picture archiving and communication system	**Picture archiving and communication system**	Lecture, discussion And scientific films	Daily examination
12	6	Student will learned the Panoramic Radiography	**Panoramic Radiography**	Lecture, discussion And scientific films	Daily examination
13	6	Student will learned the Dental Radiography : Principles and Techniques	**Dental Radiography : Principles and Techniques**	Lecture, discussion And scientific films	Daily examination
14	6	Student will learned the Introduction of Mammography	**Introduction of Mammography**	Lecture, discussion And scientific film	Daily examination
15	6	Student will learned the Fundamentals of Mammography	**Fundamentals of Mammography**	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1-** Tateno, Y., Iinuma, T. and Takano, M. eds., 2012. *Computed radiography*. Springer Science & Business Media. **2-** Williams, S., Taylor, K. and Campbell, S., 2021. *Fundamentals of Mammography-E-Book*. Elsevier Health Sciences. **3-** Seeram, E., 2019. *Digital Radiography: Physical Principles and Quality Control*. Springer. **4-** Iannucci, J. and Howerton, L.J., 2021. *Dental radiography-E-book: principles and techniques*. Elsevier Health Sciences
Main references (sources)	
Recommended books and references (scientific journals, reports…)	

Electronic References, Websites	

Course Description Form

1. Course Name:	
Radiation protection	
2. Course Code:	
3. Semester / Year:	
2ed semester , first stage	
4. Description Preparation Date:	
28/9/2026	
5. Available Attendance Forms:	
Theoretical and practical	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Anwar najum Email: anwar.ali.idi3@atu.edu.iq	
8. Course Objectives	
Course Objectives	**1-Student will be learned x-ray definition** **2- Student will be learned use the x-ray in medicine.** **3- Student will be learned different between the x-ray diagn &treatment**
9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	6	Student can learned Radiation-electromagnetic radiation-particulate radiation	**Radiation-electromagnetic radiation-particulate radiation**	Lecture, discussion And scientific films	Oral tests
2	6	Student will be learned the Light in medicine- Light has interesting properties, many of which are used in medicine- Applications of ultraviolet and infrared rays in medicine	**Light in medicine- Light has interesting properties, many of which are used in medicine- Applications of ultraviolet and infrared rays in medicine**	Lecture, discussion And scientific films	Daily examination
3	6	Student will learned the Radiation Units-rad - Roentgen-rem - Sievert - gray - dose.	**Radiation Units-rad - Roentgen-rem - Sievert - gray - dose.**	Lecture, discussion And scientific films	Daily examination
4	6	Student will learned the Radiation sources, external radiation, internal radiation, critical organs, half value layer, Curie, Radioactive Contamination	**Radiation sources, external radiation, internal radiation, critical organs, half value layer, Curie, Radioactive Contamination**	Lecture, discussion And scientific films	Daily examination
5	6	Student will learned the Closed sources - open sources - 5ionizing	**Closed sources - open sources - 5ionizing radiation - non-**	Lecture, discussion And scientific films	Daily examination

		radiation - non-ionizing radiation	**ionizing radiation**		
6	6	Student will learned the Decay process (Activity) - Radioactive Decay laws- Examples	**Decay process (Activity) - Radioactive Decay laws- Examples**	Lecture, discussion And scientific films	Daily examination
7	6	Student will learned the Isotopes- Isotones- Isomers-Common Radioactive Isotopes-Radiation Interaction In Cells	**Isotopes- Isotones- Isomers-Common Radioactive Isotopes- Radiation Interaction In Cells**	Lecture, discussion And scientific films	Daily examination
8	6	Student will learned the Radiation in medicine - the difference between diagnosis and treatment radiation herapy- half-life. .	**Radiation in medicine - the difference between diagnosis and treatment - radiation therapy- half-life.**	Lecture, discussion And scientific films	Daily examination
9	6	Student will learned the Nuclear Radiation- Discovery of radioactivity- Atom- Stability of nuclides	**Nuclear Radiation- Discovery of radioactivity- Atom- Stability of nuclides**	Lecture, discussion And scientific films	Daily examination
10	6	Student will learned the Radioactive Penetration of Conservation of Energy in reactions.	**Radioactive Decay- Penetration of radiation- Conservation of Energy in nuclear reactions.**	Lecture, discussion And scientific films	Daily examination

11	6	Student will learned the Units used in radiation protection - exposure unit Exposure rate, absorption dose rate, absorption dose rate.	**Units used in radiation protection - exposure unit Exposure ra absorption dose ra absorption dose rat**	Lecture, discussion And scientific films	Daily examination
12	6	Student will learned the exposure time - absorbed dose - equivalent dose- Effective dose.	**exposure time - absorbed dose - equivalent dose- Effective dose.**	Lecture, discussion And scientific films	Daily examination
13	6	Student will learned the Biological effects - the theory of direct and indirect influence, chemical effects, physical effects, the relative biological effect and factors affecting it.	**Biological effects - the theory of direct and indirect influence, chemical effects, physical effects, the relative biological effect and factors affecting it.**	Lecture, discussion And scientific films	Daily examination
14	6	Student will learned the Doctor's prevention methods - Patient protection methods - Ocean protection methods	**Doctor's prevention methods - Patient protection methods - Ocean protection methods**	Lecture, discussion And scientific filn	Daily examination
15	6	Student will learned the Gamma-ray barriers Radiation detectors and radioactive dosimeters (ionization chamber, coordination	**Gamma-ray barriers Radiation detectors and radioactive dosimeters (ionization chamber, coordination counter, Geiger**	Lecture, discussion And scientific films	Daily examination

		counter, Geiger counter).	**counter).**		

11.Course Evaluation
The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Radiation protection concepts and principles
Main references (sources)	Radiation protection
Recommended books and references (scientific journals, reports...)	Journal, reports and resent research
Electronic References, Websites	IAEA Safety Standards

Course Description Form

1. Course Name:
physiology
2. Course Code:
3. Semester / Year:
2ed semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours
7. Course administrator's name (mention all, if more than one name)
Name: Hussein sabah. Email: Hussein.sabah.idi16@atu.edu.iq
8. Course Objectives

Course Objectives	1-The student learns the function of the body's systems. 2-The student learns the function of the components of the bod systems.

9. Teaching and Learning Strategies	
Strategy	-Knowledge and Understanding : 1. the types of blood cells

	2. blood proteins and there functions 3. the types of contrast agents and how metabolized 4. the function of heart and its valves 5. different parts of the body 6 . the important hormones which secret from endocrine glands .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1&2	5	Student can learned definition of (physiology, homeostasis, **Living Systems)** - (Levels of Organization ,Chemicals, Cells,Tissues,Organs,Organ Systems) -Metabolism and Homeostasis **-Cell functions and functions of its organelles** (cell membrane , nucleus, cytoplasm and cell organelles), cellular transport mechanisms, **-the genetic code and protein synthesis, cell division(,mitosis,** meiosis) **,**abnormal cellular functioning—cancer **- types of Tissues and there functions**	**definition of (physiology, homeostasis, Living Systems)** **- (Levels of Organization ,Chemicals, Cells,Tissues,Organs, Organ Systems)** **-Metabolism and Homeostasis -Cell functions and functions of its organelles (cell membrane , nucleus, cytoplasm and cell organelles), cellular transport mechanisms,** **-the genetic code and protein synthesis, cell division(,mitosis, meiosis) ,abnormal cellular functioning—cancer** **- types of Tissues and there functions**	Lecture, discussion And scientific films	Oral tests
3,4&5	5	Student will be learned the Light in medicine- Light has interesting properties, many of which are used in medicine- Applications of ultraviolet and infrared rays in medicine	**Cardiovascular system The Heart** **-The function of the heart, the membranes o the heart, and the blood vessels of the heart, the valves of the heart** **-Cardiac Cycle and Heart Sounds , Cardiac Conduction Pathway, Heart Rate, Cardiac Output , Regulation of Heart Rate**	Lecture, discussion And scientific films Theoretical lectures Practical lectures inars	Daily examination Daily examination

			The Vascular System Arteries, Veins , Anastomoses **Capillaries ,**Exchanges in Capillaries **Pathways of Circulation(** Pulmonary Circulation,Systemic Circulation,Hepatic Portal Circulation,Fetal Circulation) **Velocity of Blood Flow Blood Pressure(**Maintenance of Systemic Blood Pressure ,Distribution of Blood Flow) **Regulation of Blood Pressure(**Intrinsic Mechanisms,Nervous Mechanisms) -Blood, blood cells and their .		
6&7	5	Student will learned the **The Respiratory System**	**The Respiratory System Divisions of the Respiratory System (** Nose and Nasal Cavities,Pharynx,Laryn x, Trachea and Bronchial Tree, Lungs and Pleural Membranes,Alveoli) **Mechanism of Breathing (** Inhalation,Exhalation) **Pulmonary Volumes Exchange of Gases(** Diffusion of Gases—Partial Pressures) **Transport of Gases in the Blood Regulation of Respiration(** Nervous Regulation, Chemical Regulation) **Respiration and Acid–Base Balance (**Respiratory Acidosis and Alkalosis, Respiratory Compensation	Lecture, discussion And scientific films	Daily examination
8	5	Student will learned the **The Skeletal**	**The Skeletal System and The Muscular System** -skeletal system	Lecture, discussion And scientific	Daily examination

		System and The Muscular System	function **-Factors That Affect Bone Growth and Maintenance** **-Muscle Tone (**Exercise, **Responses to Exercise—Maintaining Homeostasis)** **- Muscle Sense** (Sarcolemma—Polarization, Sarcolemma—Depolarization) **- Muscle Fiber and Energy Sources for Muscle Contraction** **- Contraction—The Sliding Filament Mechanism**	films	
9&10	5	Student will learned the **Physiology of the endocrine system of the human body**	**Physiology of the endocrine system of the human body** **Regulation of Hormone Secretion** **The Pituitary Gland(**Posterior Pituitary Gland, Antidiuretic hormone ,Oxytocin) Anterior Pituitary Gland(Growth hormone,Thyroid-stimulating hormone, Adrenocorticotropic hormone,Prolactin Follicle-stimulating hormone,Luteinizing hormone) **Thyroid Gland (** Thyroxine and T3,Calcitonin) **Parathyroid Glands (**Parathyroid Hormone) **Pancreas(**Glucagon,Insulin) **Adrenal Glands(** Adrenal Medulla,Epinephrine and norepinephrine,) (Adrenal Cortex, Aldosterone,Cortisol) **Ovaries(**Estrogen,Progesterone,Inhibin) **Testes(**Testosterone,Inhibin) **Other**	Lecture, discussion And scientific films	Daily examination

			Hormones(Prostaglandins) **Mechanisms of Horm Action(**The Two-Messen Mechanism —Pro Hormones , Action Steroid Hormones)		
11&12	5	Student will learned the **The Digestive System**	**The Digestive System Divisions of the Digestive System Types of Digestion(** Enc Products of Digestion) **Oral Cavity** (Teeth,Tongue,Salivary Glands) **Pharynx Esophagus Structural Layers of the Alimentary Tube (** Mucosa, Submucosa ,External Muscle Layer,Serosa) **Stomach , Small Intestine ,Liver, Gallbladder ,Pancreas Completion of Digestion and Absorption (**Small Intestine ,Absorption) **Large Intestine** (Elimination of Feces) **Other Functions of the Liver**	Lecture, discussion And scientific films Theoretical lecu Practical lecture	Daily examination minars Daily examinat
13&14	5	Student will learned the **The Urinary System Characteristics of Urine -The Reproductive Systems**	**The Urinary System . Kidneys (** Internal Structure of the Kidney ,The Nephron ,Renal corpuscle, Renal tubule , Blood Vessels of the Kidney **Formation of Urine (** Glomerular Filtration , Tubular Reabsorption, Mechanisms of reabsorption,Tubular Secretion,Hormones That Influence Reabsorption of Water Summary of Urine Formation) **The Kidneys and Acid–Base Balance ,Other Functions of the Kidneys**	Lecture, discussion And scientific films	Daily examination

			Elimination of Urine (Ureters ,Urinary Bladder ,Urethra ,The Urination Reflex) **Characteristics of Urine** **-The Reproductive Systems** **-Meiosis (** Spermatogenesis ,Oogenesis) -Mammary Glands , The Menstrual Cycle, pregnancy		
15	5	Student will learned the **The Nervous System** .	**The Nervous System** **Nervous System Division** **Nerve Tissue** Synapses **Types of Neurons** **Nerves and Nerve Tracts** **The Nerve Impulse** **The Spinal Cord(** Spinal Nervesm ,Spinal Cord Reflexes,Reflex arc) **The Brain(** Ventricles ,Medulla ,Pons Midbrain ,Cerebellum ,Hypothalamus,Thalamus , Cerebrum ,Frontal lobes ,Parietal lobes ,Temporal lobes ,Occipital lobes Association areas ,Basal ganglia,Corpus callosum) **Meninges and Cerebrospinal**	Lecture, discussion And scientific films Theoretical l Practical lectures Reports and Seminars	Daily examination Daily examinat

11.Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Principle of nursing
2. Course Code:
3. Semester / Year:
2ed semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours
7. Course administrator's name (mention all, if more than one name)
Name: suhad Abdul-Hussein Email: suhad.salman@atu.edu.iq
8. Course Objectives

Course Objectives	-At the end of studying this subject, the student will be able to familiarize himself with the basic principles of nursing and present the main services in case of need in the field of work. -Understand the concept of nursing and professional relations in health centers -Taking care of patients and providing nursing services to serve his work as a radiographer. -Preparing the patient for the radiographic examination. - Learn the basic principles of first aid and civil defense. .

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introduction / definition of nursing - definition of the nurse - definition of the disease - primary	**Introduction / definition of nursing - definition of the nurse - definition of the disease - primary**	Lecture, discussion And scientific films	Oral tests

		health care - health institutions in Iraq - qualifications of the nurse - professional relations - the nurse's relationship with society - the nurse's relationship with the patient - the nurse's relationship .	**health care - health institutions in Iraq - qualifications of the nurse - professional relations - the nurse's relationship with society - the nurse's relationship with the patient - the nurse's relationship**		
2	5	Student will be learned the General nursing care - Measuring and accelerating vital relationships - Defining vital relationships - Defining body temperature - Methods of taking heat through the mouth - through the anus - through the armpits - through the thigh - body temperature rate	**General nursing care - Measuring and accelerating vital relationships - Defining vital relationships - Defining body temperature - Methods of taking heat through the mouth - through the anus - through the armpits - through the thigh - body temperature rate**	Lecture, discussion And scientific films	Daily examination
3	5	Student will learned the Breathing - definition of breathing - some diseases that accompany the breathing process - some complications - influencing factors - types of breathing - blood pressure - definition of blood pressure - systolic pressure - diastolic pressure - methods of regulating blood pressure - high blood pressure and pathological relationships	**Breathing - definition of breathing - some diseases that accompany the breathing process - some complications - influencing factors - types of breathing - blood pressure - definition of blood pressure - systolic pressure - diastolic pressure - methods of regulating blood pressure - high blood pressure and pathological relationships**	Lecture, discussion And scientific films	Daily examination
4	5	Student will learned the	**How to give and**	Lecture, discussion	Daily examination

		How to give and store medicines - definition of medicine - scales and measurements - purpose of giving medicines - effect of medicine -	**store medicines - definition of medicine - scales and measurements - purpose of giving medicines - effect of medicine**	And scientific films	
5	5	Student will learned the Methods of giving medicines - oral - anal - glaucoma - inhalation	**Methods of giving medicines - oral - anal - glaucoma - inhalation**	Lecture, discussion And scientific films	Daily examination
6	5	Student will learned the Basic principles of sterilization and disinfection - surgical disinfection - medical disinfection - contamination	**Basic principles of sterilization and disinfection - surgical disinfection - medical disinfection - contamination**	Lecture, discussion And scientific films Theoretical lectu Practical lecture minars	Daily examination Daily examinat
7	5	Student will learned the Catheterization - urinary - definition of urinary catheter - cases in which urinary catheter should be given - some notes about catheterization - definition of enemas - types of enemas - making enemas	**Catheterization - urinary - definition of urinary catheter - cases in which urinary catheter should be given - some notes about catheterization - definition of enemas - types of enemas - making enemas**	Lecture, discussion And scientific films	Daily examination
8	5	Student will learned the The role of the nurse in radiography - X-rays and their types - Key points in radiography - Radiographic examination	**The role of the nurse in radiography - X-rays and their types - Key points radiography - Radiographic examination methods**	Lecture, discussion And scientific films Theoretical l Practical lectures Reports and	Daily examination Daily examinat Seminars

		methods			
9	5	Student will learned the Preparing the patient for the general radiographic examination - Preparing the patient for the special radiographic examination	**Preparing the patient for the general radiographic examination - Preparing the patient for the special radiographic examination**	Lecture, discussion And scientific films	Daily examination
10	5	Student will learned the Preparing the patie radiographic examination of digestive system gallbladder - Prepar patient for radiog examination of the u system .	**Preparing the patient for radiographic examination of the digestive system and gallbladder - Preparing the patient for radiographic examination of the urinary system .**	Lecture, discussion And scientific films	Daily examination
11	5	Student will learned the How to deal with accident patients in emergency rays . Bandages and ligatures - the dressing process .	**How to deal with accident patients in emergency rays . Bandages and ligature the dressing process .**	Lecture, discussion And scientific films	Daily examination
12	5	Student will learned the First aid - principles and application of first aid - wounds and bleeding - types of wounds - definition of bleeding - arterial pressure sites .	**First aid - principles and application of first aid - wounds and bleeding - types of wounds - definition of bleeding - arterial pressure** sites .	Lecture, discussion And scientific films	Daily examination
13	5	Student will learned the Burns - definition of burns - types of burns - first aid for burns - suffocation - definition of	**Burns - definition of burns - types of burns - first aid for burns - suffocation - definition of suffocation types of suffocation - first aid for patients**	Lecture, discussion And scientific films	Daily examination

		suffocation types of suffocation - first aid for patients with carbon monoxide suffocation	**with carbon monoxide suffocation**		
14	5	Student will learned the Cardiopulmonary resuscitation - definition of artificial respiration - methods of artificial respiration . Definition of fractures - types of fractures - fracture relief	**Cardiopulmonary resuscitation - definition of artificial respiration - methods of artificial respiration . Definition of fractures - types of fractures - fracture relief**	Lecture, discussion And scientific filn	Daily examination
15	5	Student will learned the Principles of civil defense and war injuries . First aid for patients who develop complications from coloring materials.	**Principles of civil defense and war injuries . First aid for patients who develop complications from coloring materials.**	Lecture, discussion And scientific films	Daily examination

11.Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Workshop of the Council of Program. N.L .NPub .16.1446-1971 Liwack,L.Sakata,R.and Wnkle: Consulting,evaluation and studies developmentin nursing Education 1972.W.B.Saunders company .Philadelphia. kozier,B.B.Duga.B.W.:Fundamentals of patients care . London, B.W.Saunders Company,1967 Yura, H. ; Zinick, D. : and Walsh,M.B : Nursing Leadership theory and process. 2nd ed. , New York .Appleton-Century. Cropts,1981. Meisenhelder, J.B. Clinical evaluation on instruments dilma . Nursing out look .1982 . 30 6 348 -35 . .
Main references (sources)	
Recommended books and references (scientific	

journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Medical Terminology
2. Course Code:
3. Semester / Year:
2ed semester , first stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours
7. Course administrator's name (mention all, if more than one name)
Name: maruan jabber Email: maruan.matrood.idi18@atu.edu.iq
8. Course Objectives

Course Objectives	**Student should be able to know the most important medical terms used in the operating room.** □ SPECIAL AIMS:- □ **Knowledge of the medical terminology of the human body and medically circulated in the operating room and intensive care halls**

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2	Student will learned the Introduction To Medical Terminology	Introduction To Medical Terminology	Lecture, discussion And scientific films	Oral tests
2	2	Student will be learned the Basic Word Structure	Basic Word Structure	Lecture, discussion And scientific films	Daily examination
3	2	Student will learned the The Root	The Root	Lecture, discussion And scientific films	Daily examination
4	2	Student will learned the The Prefix	The Prefix	Lecture, discussion And scientific films	Daily examination
5	2	Student will learned the The Suffix	The Suffix	Lecture, discussion And scientific films	Daily examination
6	2	Student will learned the Rules For Combining Vowels	Rules For Combining Vowels	Lecture, discussion And scientific films	Daily examination
7	2	Student will learned the Combining Forms	Combining Forms	Lecture, discussion And scientific films	Daily examination
8	2	Student will learned the Medical terminology and pathology	Medical terminology and pathology	Lecture, discussion And scientific films	Daily examination
9	2	Student will learned the Terms of Cardiovascular system Terms of Nervous system	Terms of Cardiovascular system Terms of Nervous system	Lecture, discussion And scientific films	Daily examination

10	2	Student will learned the Terms of Digestive system	Terms of Digestive system	Lecture, discussion And scientific Films	Daily examination
11	2	Student will learned the Terms of Urinary system	Terms of Urinary system	Lecture, discussion And scientific films	Daily examination
12	2	Student will learned the Terms of Blood and Lymphatic system .	Terms of Blood and Lymphatic system	Lecture, discussion And scientific films	Daily examination
13	2	Student will learned the Terms of Respiratory system	Terms of Respiratory system	Lecture, discussion And scientific films	Daily examination
14	2	Student will learned the Terms Of Teeth And Oral Facial Region	Terms Of Teeth And Oral Facial Region	Lecture, discussion And scientific filn	Daily examination
15	2	Student will learned the Positional and directional terms	Positional and directional terms	Lecture, discussion And scientific films	Daily examination

11.Course Evaluation

The grade distribution is as follows: 30 marks for monthly and daily exams for the first semester. 70 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Radiology &sonography Techniques
First Semester
Second Stage

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
			theoretical	**practical**
second Stage/First Semester		**Radiography of the skull**	**2**	**7**
		Radiological Procedures	**2**	**7**
		Radiological **Equipment Techniques**	**2**	**7**
		Radiological Anatomy	**2**	**4**
		Principle of community health	**2**	
		Professional Ethics	**2**	–
		Methodology	–	**2**
		The Crimes of the defunct Baath Party	**2**	–
		Language Arabic	**2**	–

2. Teaching and Learning Strategies
1-Laboratory practice 2- Methodological training in hospitals and X-rays institute. 3- Off-study (Summer) training. 4-Making reports and seminars.
3. Evaluation methods
1- Theoretical and practical exams (semi-final). 2- Oral tests. 3- Daily estimation. 4- Non-class activity. 5- Final exam.

4. Faculty			
Faculty Members			
Academic Rank	**Specialization**	**Special Requirements/Skills**	**Number of the teaching staff**

			(if applicable)			
	General	**Special**			**Staff**	**Lecturer**
	1	5			6	3

Professional Development
Mentoring new faculty members
Successful mentoring relationships go through four phases: preparation, negotiating, enabling growth, and closure. These sequential phases build on each other and vary in length. In each phase, there are specific steps and strategies that lead to mentoring excellence .
Professional development of faculty members
Assess the professional development needs of your faculty and institution. Identify evidence-based approaches faculty developers use to deliver services. Design successful learning communities, institutes, and workshops. Develop your instructional consultation skills in group and individual settings.

5. Acceptance Criterion

1- Student's general average at high school.
2- Preference of students.
3- The feasible capacity of X-ray department.

6. The most important sources of information about the program

1- Curriculum books.
2- Updating syllabuses according to accredited global syllabuses.
3- Searching through the Internet to obtain the most recent scientific information

7. Program Development Plan

Course Description Form

1. Course Name:
Radiography of the skull
2. Course Code:
3. Semester / Year:
First semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory and 7 hours practical in a week 135 hours
7. Course administrator's name (mention all, if more than one name)
Name: Muhammad Falah Email:
8. Course Objectives

Course Objectives	1--How to take the x-ray in multiple positions. 2- How to know if the x-ray image is good or bad and treat it. 3-how to read the examination paper and photograph the member to be examined in the appropriate position
9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the Important points to confirm the clarity of the radiograph in terms of the amount of radiation	Important points to confirm the clarity of the radiograph in terms of the amount of radiation	Lecture, discussion And scientific films	Oral tests

2	9	Student will learned the Important anatomical terms in radiography all points, lines and planes.	Important anatomical terms in radiography all points, lines and planes.	Lecture, discussion And scientific films	Daily examination
3	9	Student will learned the Important points to prepear for the examination in the skull.	Important points to prepear for the examination in the skull.	Lecture, discussion And scientific films	Daily examination
4	9	Student will learned the X-ray skull PA , Lateral ,AP, with criteria.	X-ray skull PA , Lateral ,AP, with criteria.	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the X-ray base of the skull ,town's view with criteria	X-ray base of the sl ,town's view with crite	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the X-ray Sellaturcica ,post nasal space PNS children with criteria.	X-ray Sellaturcica ,p nasal space P children with criteria.	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the X-ray sinuses open the mouth(water's, paranasal sinuses,Lateral, criteria , X-ray Cald well, with criteria.	X-ray sinuses open the mouth(water's, paranasal sinuses,Lateral, criteria , X-ray Cald well, with criteria.	Lecture, discussion And scientific films	Daily examination
8	9	Student will learned the X-ray sphenoid sinuses addition base of the skull. X-ray facial bone or soft tissue multiple film .	X-ray sphenoid sinuses addition base of the skull. X-ray facial bone or soft tissue multiple film .	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the X-ray zygomatic arch(base of the skull or town's) and AP oblique.	X-ray zygomatic arch(base of the skull or town's) and AP oblique.	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the X-ray maxilla bone X-ray hard palate with occlusal film.	X-ray maxilla bone X-ray hard palate with occlusal film.	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the X-ray nasal bone ,Lateral ,occlusal film ,superior inferior occlusal film. Advantage occlusal film in x-ray nasal bone.	X-ray nasal bone ,Lateral ,occlusal film ,superior inferior occlusal film. Advantage occlusal film in x-ray nasal bone.	Lecture, discussion And scientific films	Daily examination

12	9	Student will learned the X-ray orbit bone and PA oblique. X-ray optic foramen.	X-ray orbit bone and PA oblique. X-ray optic foramen.	Lecture, discussion And scientific films	Daily examination
13	9	Student will learned the X-ray mastoid , stenver's ,Internal Auditory Meatus, with criteria. X-ray tempromandibular joint with criteria.	X-ray mastoid , stenver's ,Internal Auditory Meatus, with criteria. X-ray tempromandibular joint with criteria.	Lecture, discussion And scientific films	Daily examination
14	9	Student will learned the X-ray mandible (PA, Lateral oblique prone) , Lateral oblique supine ,Oblique , Molar, Chin.	X-ray mandible (P Lateral oblique prone Lateral oblique sup ,Oblique , Molar, Chin	Lecture, discussion And scientific filn	Daily examination
15	9	Student will learned the X-ray salivary gland (Parotid gland, Submandibular gland, Sublingual gland)	X-ray salivary gland (Parotid gland, Submandibular gland, Sublingual gland)	Lecture, discussion And scientific films	Daily examination

11.Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Philip W. Ballinger; Merrill's Atlas of radiographic positions and radiological procedures. Ninth Edition, 2005, Mosby-Year Book, Inc. 2-. Frances Aitchison; Chapman & Nakielny, A guide to radiological procedures. Fifth Edition, 2009. Saunders Elsevier. 3- The Royal College of radiologists (2005) Standards for intravenous Iodinated contrast Administration to Adult Patients. London: The Royal College of radiologists.
Main references (sources)	1-Schoepf, U.J., Zwerner, P.I., Savino, G., et al. (2007) Coronary CT angiography: how I do it. Radiology. 18. Positioning in Radiography for K.C.Clark London 1975. 2-. Roentegnoggraphic positons .Vinita Mervill, Part I,II,.1965. 20. Roenterapic position .VinnitaMervill,Part I,II,.1965. 3. Positioning in Radiography for K.C.Clark London 1975. 4-. Normal Radiographic Anatomy for Dr, Meschan 1976 U.S.A
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	European Society of Urogenital Radiology Contrast Me

	Safety Committee (2007) ESUR guidelines on cont media version 6.0. www.esur.org.

Course Description Form

1. Course Name:
Radiological Procedures
2. Course Code:
3. Semester / Year:
First semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory and 7 hours practical in a week 135 hours
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Haider Saeed Shandal Email:
8. Course Objectives

Course Objectives	**Aims of Subject Study:** The graduate student learns special procedure in radiological, and MRI and the contrast agents used for the soft tissue.
9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute. 4- (Summer) training.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the Contrast media, historical development	Contrast media, historical development	Lecture, discussion And scientific films	Oral tests

2	9	Student will learned the types of radiological agents.	. types of radiological agents.	Lecture, discussion And scientific Films	Daily examination
3	9	Student will learned the Intravascular contrast media	Intravascular contrast media	Lecture, discussion And scientific films	Daily examination
4	9	Student will learned the contrast media of the gastrointestinal tract	contrast media of the gastrointestinal tract	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the Contrast agents in magnetic resonance imaging	Contrast agents magnetic resonar imaging	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the adverse effects of intravenous water soluble contrast media.	adverse effects of intravenous water soluble contrast media.	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the Introduction to contrast media of the gastrointestinal tract.	Introduction to contrast media of the gastrointestinal tract	Lecture, discussion And scientific films	Daily examination
8	9	Student will learned the Contrast swallow	Contrast swallow	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the Barium meal	Barium meal	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the gastro-esophagus reflux and hiatal hernia.	gastro-esophagus reflux and hiatal hernia.	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the Barium follow through	Barium follow through	Lecture, discussion And scientific films	Daily examination
12	9	Student will learned the Small bowel enema	Small bowel enema	Lecture, discussion And scientific films	Daily examination
13	9	Student will learned the Barium enema.	Barium enema	Lecture, discussion And scientific films	Daily examination
14	9	Student will learned the double contrast and single contrast, Reduction of an intussusception	double contrast a single contra Reduction of intussusception	Lecture, discussion And scientific films	Daily examination
15	9	Student will learned the Sinogram, colostomy enema	Sinogram, colostomy enema	Lecture, discussion And scientific films	Daily examination
11.Course Evaluation					

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Philip W. Ballinger; Merrill's Atlas of radiographic positions and radiological procedures. Ninth Edition, 2005, Mosby-Year Book, Inc. 2. Frances Aitchison; Chapman & Nakielny, A guide to radiological procedures. Fifth Edition, 2009. Saunders Elsevier. 3. The Royal College of radiologists (2005) Standards for intravenous Iodinated contrast Administration to Adult Patients. London: The Royal College of radiologists.
Main references (sources)	1- Schoepf, U.J., Zwerner, P.I., Savino, G., et al. (2007) Coronary CT angiography: how I do it. Radiology. 28. Positioning in Radiography for K.C.Clark London 1975.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	European Society of Urogenital Radiology Contrast Me Safety Committee (2007) ESUR guidelines on cont media version 6.0. www.esur.org.

Course Description Form

1. Course Name:

Radiological Equipment Techniques

2. Course Code:

3. Semester / Year:

First semester , second stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical and practical

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory and 7 hours practical in a week
135 hours

7. Course administrator's name (mention all, if more than one name)

Name: Dr. Ameer Abdul-Kadhim Awda
Email: ameer.odaa.idi4@atu.edu.iq

8. Course Objectives

Course Objectives	**The student should be able to know the following -:** **1- Familiarize students with the types of radiation devices.** **2- How students use these devices ideally in terms of conducting special examinations** **Theoretical Assignments**.

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the **Mammography**	**Mammography**	Lecture, discussion And scientific films	Oral tests
2	9	Student will learned the **Fluoroscopy**	**Fluoroscopy**	Lecture, discussion And scientific Films	Daily examination
3	9	Student will learned the **Image intensification of Fluoroscopy, Television monitor and image**	**Image intensification of Fluoroscopy, Television monitor**	Lecture, discussion And scientific films	Daily examination

			and image		
4	9	Student will learned the **CT Scan, History of Computed Tomography, Operating steps**	**CT Scan, History of Computed Tomography, Operating steps**	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the **Different Generations of CT Scanners , First-generation CT, Second-generation**	**Different Generations CT Scanners , Fi generation CT, Seco generation**	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the **Third-generation CT, Fourth-generation CT, Fifth-generation CT (Electron-beam)**	**Third-generation CT, Fourth-generation CT, Fifth-generation CT (Electron-beam)**	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the **sixth-generation CT and Saven - generation CT**	**sixth-generation CT and Saven - generation CT**	Lecture, discussion And scientific films	Daily examination
8	9	Student will learned the **Principles of helical CT scanning operation**	**Principles of helical CT scanning operation**	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the **CT image, Data acquisition in CT**	**CT image, Data acquisition in CT**	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the **Patient positioning in CT**.	**Patient positioning in CT**	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the **Computed tomography fluoroscopy**	**Computed tomography fluoroscopy**	Lecture, discussion And scientific films	Daily examination
12	9	Student will learned the **Magnetic Resonance Imaging, Historical introduction, the Basic MR System Components**	**Magnetic Resonance Imaging, Historical introduction, the Basic MR System Components**	Lecture, discussion And scientific films	Daily examination
13	9	Student will learned the **MRI (magnetic resonance imaging) scan work**	**MRI (magnetic resonance imaging) scan work**	Lecture, discussion And scientific films	Daily examination
14	9	Student will learned the **history and physics of Ultrasound beam**	**history and physics Ultrasound beam**	Lecture, discussion And scientific film	Daily examination
15	9	Student will learned the **Ultrasound machine and Operational modes**	**Ultrasound machine and Operational modes**	Lecture, discussion And scientific films	Daily examination
11. Course Evaluation					

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Computer tomography for technologists, A comprehensive text / lois E. Romans2018 2- CT Teaching Manual , A systematic Approach to CT reading , Matthias Hofer 2016 3- MRI , Basic principles and Applications , MARKA.BROWIN,PH.D, RICHARDC. & SEMELKA,M.A.2020 4- Magnetic Resonance Imaging , Scott A. Huettel , Allen W. song & Gregory M.carthy 2020 5- Mammography Radiography and Radiology by R.A. Cawson , 2018
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:

Radiological Anatomy

2. Course Code:

3. Semester / Year:

First semester , second stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical and practical

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory and 4 hours practical in a week
90 hours

7. Course administrator's name (mention all, if more than one name)

Name: Shahad Ahmed Bakhit
Email: shahad.bkhaet.idi10@atu.edu.iq

8. Course Objectives

Course Objectives	**The student should be able to know the following -:** **1** The studies of the structure of the whole of the system of the body of the human which are appear in the X-ray plain picture and with contrast medium of the multiple positions..

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons 2-Laboratory practice 3-Methodological training in hospitals and X-rays institute.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the Growth and development of the bone and Limitation of the bone age and anatomy structure of the skeleton of the body.	Growth and development of the bone and Limitation of the bone age and anatomy structure of the skeleton of the body.	Lecture, discussion And scientific films	Oral tests

2	9	Student will learned the Upper limb bone and shoulder joint, scapula bone and Humerus bone and elbow joint.	Upper limb bone and shoulder joint, scapula bone and Humerus bone and elbow joint.	Lecture, discussion And scientific Films	Daily examination
3	9	Student will learned the Forearm bone ad wrist joint.	Forearm bone ad wrist joint.	Lecture, discussion And scientific films	Daily examination
4	9	Student will learned the Hand (metacarpal, phalangus) bone and change growth.	Hand (metacarpal, phalangus) bone and change growth.	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the Lower limb bone and pelvis bone.	Lower limb bone a pelvis bone.	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the Hip joint and femur.	Hip joint and femur.	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the Knee joint, pattela and leg.	Knee joint, pattela and leg.	Lecture, discussion And scientific films	Daily examination
8	9	Student will learned the Ankle joint, tarsal bone, meta tarsal, toe's.	Ankle joint, tarsal bone, meta tarsal, toe's.	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the Study the structure of the skull bone.	Study the structure of the skull bone.	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the Dietal common in area of the skull (Nasal, sinuses, orbit).	Dietal common in area of the skull (Nasal, sinuses, orbit).	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the Temporal bone and sella turcica.	Temporal bone and sella turcica.	Lecture, discussion And scientific films	Daily examination
12	9	Student will learned the Anatomy of the structure vertebral column.	Anatomy of the structure vertebral column.	Lecture, discussion And scientific films	Daily examination
13	9	Student will learned the Anatomy of the respiratory system (upper pass).	Anatomy of the respiratory system (upper pass).	Lecture, discussion And scientific films	Daily examination
14	9	Student will learned the Lungs, pleural membrane and diaphragm.	Lungs, pleural membra and diaphragm.	Lecture, discussion And scientific filn	Daily examination
15	9	Student will learned the Anatomy of the lymphoid system.	Anatomy of the lymphoid system.	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	1. Anatomy for Diagnostic Stephen Ryan , Michael (MMcN) Sarah, Emma, Jack and Nick (SE) . 2. Practical Radiological Anatomy Sarah McWilliams. 3. Pocket Atlas of Sectional Anatomy Computed Tomography and Magnetic Resonance Imaging. Torsten B. Moeller, M.D. Am Caritas Radiogravic anatomy Frank Slaby, Euggene R.Jacobs
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:

Community Health

2. Course Code:

3. Semester / Year:

First semester , second stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical and practical

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory (30 hour)

7. Course administrator's name (mention all, if more than one name)

Name: Suhad Abdul-Hussein
Email: suhad.salman@atu.edu.iq

8. Course Objectives

Course Objectives	**The student should be able to know the following -:** **1** Foundations and concepts of community health, primary health control, modes of transmission, and prevention of socially significant childhood diseases, as well as diseases resulting from environmental pollution and endemic diseases in Iraq, with the aim of achieving the general goals of individual and community health, namely, optimal health. 2. Public health programs provided by the Ministry of Health, including expanded immunization programs, implementation of the primary healthcare system, and projects to control certain endemic and communicable diseases, and to combat diarrhea and its complications through oral rehydration therapy, in cooperation with the World Health Organization. 3. Causes of environmental pollution and how to prevent it. 4. Methods of dealing with patients and citizens and developing their awareness in the field of health awareness.

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the Definition of health; factors that determine health.	**Definition of health; factors that determine health.**	Lecture, discussion And scientific films	Oral tests
2	9	Student will learned the Preventive measures as means to achieve health;	**Preventive measures as means to achieve health; health metrics**	Lecture, discussion And scientific Films	Daily examination

		health metrics and indicators	**and indicators**		
3	9	Student will learned the Epidemiology: Definition, Foundations and Objectives of Epidemiology.	**Epidemiology: Definition, Foundations and Objectives of Epidemiology.**	Lecture, discussion And scientific films	Daily examination
4	9	Student will learned the Causes of disease; conditions leading to the spread of disease.	**Causes of disease; conditions leading to the spread of disease**	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the Communicable diseases: Definition, source of disease, methods of disease transmission, person susceptible to the disease, diseases that affect the respiratory system, diseases caused by bacteria.	**Communicable diseas Definition, source disease, methods disease transmissi person susceptible to disease, diseases t affect the respirat system, diseases caused bacteria.**	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the Tonsillitis, laryngitis, scarlet fever, pneumonia, diphtheria, tetanus, pertussis.	**Tonsillitis, laryngitis, scarlet fever, pneumonia, diphtheria, tetanus, pertussis.**	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the Diseases caused by viruses: measles, rubella, influenza.	**Diseases caused by viruses: measles, rubella, influenza.**	Lecture, discussion And scientific filr	Daily examination
8	9	Student will learned the Smallpox, chickenpox, herpes, mumps.	**Smallpox, chickenpox, herpes, mumps.**	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the Diseases transmitted through the digestive system: cholera, typhoid fever, food poisoning	**Diseases transmitted through the digestive system: cholera, typhoid fever, food poisoning**	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the Diseases caused by viruses: viral hepatitis, polio	**Diseases caused by viruses: viral hepatitis, polio**	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the Diseases transmitted by puncture wounds include erysipelas, tetanus, and anthrax..	**Diseases transmitted by puncture wounds include erysipelas, tetanus, and anthrax.**	Lecture, discussion And scientific films	Daily examination
12	9	Student will learned the Immunity (Vaccination): Definition and Types	**Immunity (Vaccination): Definition and Types**	Lecture, discussion And scient	Daily examination

				films	
13	9	Student will learned the Vaccines: Expanded Program on Immunization in Iraq	**Vaccines: Expanded Program on Immunization in Iraq**	Lecture, discussion And scientific fi	Daily examination
14	9	Student will learned the Environmental pollution, radiation pollution, prevention of environmental pollution	**Environmental polluti radiation polluti prevention environmental pollution**	Lecture, discussion And scient films	Daily examination
15	9	Student will learned the General review..	**General review.**	Lecture, discussion And scientific filr	Daily examination

11. Course Evaluation

The grade distribution is as follows: 30 marks for monthly and daily exams for the first semester. 70 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1 Public Health and Health Services Dr. Fawzi Jadallah Dr. Felix Gerges – – – Dr. Abdul Wadood Al-Mufti Dr. Saad Tawfiq Al-Mukhtar Mr. Adnan Al-Rubaie M – – 1983 Part Al-Rubaie. -2 Public Health and Health Services Dr. Felix Gerges Dr. Jaafar Al-Hassani Dr. Muzaffar Al-Samarrai Dr. Falih – – – – Matar Dr. Amjad Niyazi Dr. Mohsen Al-Khafaji Dr. Fawzi Jadallah – – – Engineer Ni'ma Al-Shukerji 1983 Part Two.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Professional Ethics
2. Course Code:
3. Semester / Year:
First semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory (30 hour)
7. Course administrator's name (mention all, if more than one name)
Name: Dr.Afrah Rahem Email: afrh.reheim.idi21@atu.edu.iq
8. Course Objectives

Course Objectives	**The student should be able to know the following -:** **1** Foundations and concepts of community health, primary health control, modes of transmission, and prevention of socially significant childhood diseases, as well as diseases resulting from environmental pollution and endemic diseases in Iraq, with the aim of achieving the general goals of individual and community health, namely, optimal health. 2. Public health programs provided by the Ministry of Health, including expanded immunization programs, implementation of the primary healthcare system, and projects to control certain endemic and communicable diseases, and to combat diarrhea and its complications through oral rehydration therapy, in cooperation with the World Health Organization. 3. Causes of environmental pollution and how to prevent it. 4. Methods of dealing with patients and citizens and developing their awareness in the field of health awareness.

9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1 &2	2	Student will learned the 1- Understands the concept of ethics. 2. Explains the general principles of ethics. 3. Identifies the sources of ethics. 4. Highlights the most important ethical values. 5. Distinguishes the importance of ethics for the individual and society. 6. Engages in activities related to the concept of ethics and its sources.	**Ethics**	Lecture, discussion And scientific films	Oral tests
3	2	Student will learned the 1. Demonstrates the importance of work. 2. Lists work behaviors. 3. Explains the concept of a profession. 4. Defines a profession. 5. Compares the concepts of work, profession, and craft. 6. Explains the standards upon which a profession should be based.	Work and profession	Lecture, discussion And scientific Films	Daily examination
4	2	Student will learned the 1. Understands professional ethics. 2. Lists the positive benefits of adhering to professional ethics. 3. Describes the characteristics of work ethics. 4. Explains the qualities of professional ethics. 5. Explains the steps to achieving an acceptable level of professional ethics..	Professional ethics	Lecture, discussion And scientific films	Daily examination
5&6	2	Student will learned the 1. It illustrates the importance of integrity in the workplace. 2. It explains the importance of honesty in the workplace. 3. It describes the nature of giving advice in the workplace. 4. It lists aspects of fairness in job performance. 5. It explains the nature of good conduct in the workplace. 6. It explains the reasons for poor work	Values and professional ethics -	Lecture, discussion And scientific films	Daily examination

		performance.			
7&8	2	Student will learned the 1. Unethical administrative behavior is defined. 2. Administrative corruption is defined. 3. Types of administrative corruption are explained.	Unethical behav patterns in the professi	Lecture, discussion And scientific films	Daily examination
9&10	2	Student will learned the , 1. Explains the method of establishing professional ethics. 2. Lists the levels of building and establishing professional ethics. 3. Discusses the means and methods of establishing professional ethics. 4. Explains the considerations that must be taken into account when drafting a code of ethics for the profession. Discusses how ethical behavior in the workplace is promoted according to Kritner and Kinneke..	Methods and means of establishing professional ethics values	Lecture, discussion And scientific films	Daily examination
11-15	2	It explains the qualities that a member of the healthcare staff should possess. 2. It lists the duties of a member of the healthcare staff towards their profession. 3. It explains the duties of the healthcare staff towards the patient. It lists the duties of the healthcare staff towards the community.	Characteristics and duties of a healthcare staff member	Lecture, discussion And scientific filr	Daily examination

11. Course Evaluation

The grade distribution is as follows: 30 marks for monthly and daily exams for the first semester. 70 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:

The crimes of the Baath regime

2. Course Code:

3. Semester / Year:

First semester , second stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical and practical

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory (30 hour)

7. Course administrator's name (mention all, if more than one name)

Name: Eenas humza salman
Email: Eenas.salman.idi9@atu.edu.iq

8. Course Objectives

Course Objectives	**To provide the student with knowledge and information about the crimes of the Ba'ath regime in Iraq.** **Specific objective: To provide the student with the facts about the crimes committed under the Ba'ath regime in Iraq.**

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the The Concept and Categories of Crimes Definition of Crime Linguistically and Technically Categories of Crimes Crimes of the Ba'ath Regime According to the Documentation of the Iraqi High Criminal Court Law of	**The Concept and Categories of Crimes** **Definition of Crime Linguistically and Technically** **Categories of Crimes** **Crimes of the Ba'ath Regime According to the Documentation of the Iraqi High Criminal Court Law of 2005**	Lecture, discussion And scientific films	Oral tests

		2005.			
2	2	Student will learned the Types of International Crimes Decisions Issued by the Supreme Criminal Court The Crime of Suppressing the Sha'ban Uprising	**Types of International Crimes** **Decisions Issued by the Supreme Criminal Court** **The Crime of Suppressing the Sha'ban Uprising**	Lecture, discussion And scientific Films	Daily examination
3	2	Student will learned the Psychological and social crimes, their effects, and the most prominent violations of the Ba'athist regime in Iraq - Psychological crimes.	Psychological and social crimes, their effects, and the most prominent violations of the Ba'athist regime in Iraq - Psychological crimes	Lecture, discussion And scientific films	Daily examination
4	2	Student will learned the The crime of suppressing the Sha'ban uprising	The crime of suppressing the Sha'ban uprising	Lecture, discussion And scientific films	Daily examination
5	2	Student will learned the The mechanism of psychological pressure and punishment	The mechanism psychological pressu and punishment	Lecture, discussion And scientific films	Daily examination
6	2	Student will learned the Psychological effects of crimes	Psychological effects of crimes	Lecture, discussion And scientific films	Daily examination
7	2	Student will learned the Violations of Iraqi laws.	Violations of Iraqi laws	Lecture, discussion And scientific filr	Daily examination
8	2	Student will learned the Some decisions regarding the political and military violations of the Ba'ath regime	Some decisions regarding the political and military violations of the Ba'ath regime	Lecture, discussion And scientific films	Daily examination
9	2	Student will learned the Environmental crimes of the Ba'ath regime in Iraq	Environmental crimes of the Ba'ath regime in Iraq	Lecture, discussion And scientific films	Daily examination
10	2	Student will learned the Halabja city	Halabja city	Lecture, discussion And scientific Films	Daily examination

11	2	Student will learned the Drying the marshes..	Drying the marshes	Lecture, discussion And scientific films	Daily examination
12	2	Student will learned the Mass grave crimes	Mass grave crimes	Lecture, discussion And scient films	Daily examination
13	2	Student will learned the Events spanning from 1979 to 2003 AD	Events spanning from 1979 to 2003 AD	Lecture, discussion And scientific fi	Daily examination
14	2	Student will learned the The events of the 1991 Sha'ban uprising and their relation to mass graves	The events of the 19 Sha'ban uprising a their relation to ma graves	Lecture, discussion And scient films	Daily examination
15	2	Student will learned the Mass graves of victims of the 1991 Sha'ban uprising..	Mass graves of victims of the 1991 Sha'ban uprising	Lecture, discussion And scientific filr	Daily examination

11. Course Evaluation

The grade distribution is as follows: 30 marks for monthly and daily exams for the first semester. 70 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Radiology &sonography Techniques
Second Semester
Second Stage

1. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
second Stage/ Second Semester		Radiography of the chest and abdomen	2	7
		CT and MRI examinations	2	7
		Medicine and Surgery	1	3
		Medical imaging anatomy	2	4
		Statistics	2	
		Research Project	–	2
		Principle of computer2	1	1

2. Teaching and Learning Strategies

1-Laboratory practice
2- Methodological training in hospitals and X-rays institute.
3- Off-study (Summer) training.
4-Making reports and seminars.

3. Evaluation methods

1- Theoretical and practical exams (semi-final).
2- Oral tests.
3- Daily estimation.
4- Non-class activity.
5- Final exam.

4. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
	1	5			6	3

Professional Development

Mentoring new faculty members

Successful mentoring relationships go through four phases: preparation, negotiating, enabling growth, and closure. These sequential phases build on each other and vary in

length. In each phase, there are specific steps and strategies that lead to mentoring excellence .
Professional development of faculty members
Assess the professional development needs of your faculty and institution. Identify evidence-based approaches faculty developers use to deliver services. Design successful learning communities, institutes, and workshops. Develop your instructional consultation skills in group and individual settings.

5. **Acceptance Criterion**
1- Student's general average at high school. 2- Preference of students. 3- The feasible capacity of X-ray department.

6. **The most important sources of information about the program**
1- Curriculum books. 2- Updating syllabuses according to accredited global syllabuses. 3- Searching through the Internet to obtain the most recent scientific information
7. Program Development Plan

Course Description Form

1. Course Name:
Radiography of the chest and abdomen
2. Course Code:
3. Semester / Year:
second semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory and 7 hours practical in a week 135 hours
7. Course administrator's name (mention all, if more than one name)
Name: Mohamed falah Email:
8. Course Objectives

Course Objectives	The second stage student graduates from the department of radiology should be familiar with all skull and chest examinations in various positions. **The common and special:** **The student learns:** 1. How to take the x-ray in multiple positions. 2- How to know if the x-ray image is good or bad and treat it. 3-how to read the examination paper and photograph the member to be examined in the appropriate position.

9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the Important information as an introduction to chest exams radiographs	**Important information as an introduction to chest exams radiographs**	Lecture, discussion And scientific films	Oral tests
2	9	Student will learned the X-ray chest PA, AP , Lateral, with criteria. The Crime of	**X-ray chest PA, AP , Lateral, with criteria.**	Lecture, discussion And scientific Films	Daily examination

		Suppressing the Sha'ban Uprising			
3	9	Student will learned the X-ray chest blique (Anterior and Posterior).	**X-ray chest Oblique (Anterior and Posterior).**	Lecture, discussion And scientific films	Daily examination
4	9	Student will learned the X-ray chest heart, and PA with barium .	**X-ray chest heart, and PA with barium .**	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the X-ray Lordotic and (Apical lung Lateral position) with criteria	**X-ray Lordotic and (Api lung Lateral position) w criteria**	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the X-ray chest fluid level, and Decubitus .	**X-ray chest fluid level, and Decubitus .**	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the X-ray children , PA or AP and Lateral .	**X-ray children , PA or AP and Lateral .**	Lecture, discussion And scientific filr	Daily examination
8	9	Student will learned the X-ray ribs (AP and Oblique or PA and Oblique) and with criteria. X-ray Costal joint . with criteria.	**X-ray ribs (AP and Oblique or PA and Oblique) and with criteria.** **X-ray Costal joint . with criteria.**	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the X-ray Trachea (AP ,Lateral) with criteria. X-ray Soft tissue of the neck (AP, Lateral).	**X-ray Trachea (AP ,Lateral) with criteria.** **X-ray Soft tissue of the neck (AP, Lateral).**	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the X-ray sternum (Lateral ,Oblique) with criteria	**X-ray sternum (Lateral ,Oblique) with criteria**	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the X-ray Clavical bone .(AP and Lateral)	**X-ray Clavical bone .(AP and Lateral)**	Lecture, discussion And scientific films	Daily examination
12	9	Student will learned the X-ray Sterno-Clavical joint	**X-ray Sterno-Clavical joint**	Lecture, discussion And scientific films	Daily examination
13	9	Student will learned the X-ray Scapula (AP and Lateral or Y view).	**X-ray Scapula (AP and Lateral or Y view).**	Lecture, discussion And scientific films	Daily examination
14	9	Student will learned the X-ray Mammography (Cranio-Caudially, Medio-Lateral , Lateral-L medial)and (Medio-Lateral oblique ,Lateral-	**X-ray Mammography (Cranio-Caudially, Medio-Lateral , Lateral-L medial)and (Medio-Lateral oblique ,Lateral-Medial oblique).**	Lecture, discussion And scientific filn	Daily examination

		Medial oblique). Advantage compression of breast.	**Advantage compression breast.**		
15	9	Student will learned the x-ray abdomen(erect and supine).x-ray KUB.	**x-ray abdomen(erect and supine).x-ray KUB.**	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Philip W. Ballinger; Merrill's Atlas of radiographic positions and radiological procedures. Ninth Edition, 2005, Mosby-Year Book, Inc. 2- Frances Aitchison; Chapman & Nakielny, A guide to radiological procedures. Fifth Edition, 2009. Saunders Elsevier. 3- The Royal College of radiologists (2005) Standards for intravenous Iodinated contrast Administration to Adult Patients. London: The Royal College of radiologists.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	European Society of Urogenital Radiology Contrast Me Safety Committee (2007) ESUR guidelines on contr media version 6.0. www.esur.org.

Course Description Form

1. Course Name:

CT and MRI examinations

2. Course Code:

3. Semester / Year:

second semester , second stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical and practical

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory and 7 hours practical in a week
135 hours

7. Course administrator's name (mention all, if more than one name)

Name: Dr.Haider sead shindal
Email:

8. Course Objectives

Course Objectives	The graduate student learns special procedure in radiological, CT and MRI and the contrast agents used for the soft tissue. **The common and special:** **The students learn:** 1. How the patient takes the contrast agents during examination. 2. The study of the whole body with using the contrast medium. 3. The adverse effects of the contrast agents during examination.

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	9	Student will learned the Computed tomography and MRI of the gastrointestinal tract :Liver, biliary tract and pancreas; plain film, ultrasound, CT scan and MRI. Cholangiography; T-tube)	**Computed tomography and MRI of the gastrointestinal tract :Liver, biliary tract and pancreas; plain film, ultrasound, CT scan and MRI. Cholangiography; T-tube)**	Lecture, discussion And scientific films	Oral tests

2	9	Student will learned the cholangiography and endoscopic retrograde cholangiopancreatography (ERCP	**cholangiography and endoscopic retrograde cholangiopancreatography (ERCP)**	Lecture, discussion And scientific Films	Daily examination
3	9	Student will learned the Salivary glands, conventional and CT sialography.	**Salivary glands, conventional and CT sialography.**	Lecture, discussion And scientific films	Daily examination
4	9	Student will learned the Urinary tract; excretion urography, Ct scan of the urinary tract and MRI of the urinary tract	**Urinary tract; excretion urography, Ct scan of the urinary tract and MRI of the urinary tract**	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the Ascending urethrography in the male, micturating cystourethrography	**Ascending urethrography the male, micturat cystourethrography**	Lecture, discussion And scientific films	Daily examination
6	9	Student will learned the Retrograde pyelouretrography and percutaneous antegrade pyelography.	**Retrograde pyelouretrography and percutaneous antegrade pyelography**	Lecture, discussion And scientific films	Daily examination
7	9	Student will learned the Reproductive system; hystrosalpingography and ultra sound of the female reproductive system	**Reproductive system; hystrosalpingography and ultra sound of the female reproductive system**	Lecture, discussion And scientific filr	Daily examination
8	9	Student will learned the CT and MRI of the reproductive system	**CT and MRI of the reproductive system**	Lecture, discussion And scientific films	Daily examination
9	9	Student will learned the Respiratory system; CT and MRI of the respiratory system	**Respiratory system; CT and MRI of the respiratory system Respiratory system; CT and MRI of the respiratory system Respiratory system; CT and MRI of the respiratory system**	Lecture, discussion And scientific films	Daily examination
10	9	Student will learned the X-ray sternum (Lateral ,Oblique) with criteria	**Heart; angiocardiography and coronary arteriography**	Lecture, discussion And scientific Films	Daily examination
11	9	Student will learned the Cardiac computed tomography, Arterial system; catheter technique and	**Cardiac computed tomography, Arterial system; catheter technique and**	Lecture, discussion And scientific films	Daily examination

		complications	**complications**		
12	9	Student will learned the Ascending aortography, arteriography of the lower limbs	**Ascending aortography, arteriography of the lower limbs**	Lecture, discussion And scientific films	Daily examination
13	9	Student will learned the XVenous system; peripheral and central venography, CT and MRI of the arterial and venous systems	**Venous system; peripheral and central venography, CT and MRI of the arterial and venous systems**	Lecture, discussion And scientific films	Daily examination
14	9	Student will learned the Brain ; CT and MRI of the brain	**Brain ; CT and MRI of brain**	Lecture, discussion And scientific film	Daily examination
15	9	Student will learned the Cerebral angiography.	**Cerebral angiography**	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Philip W. Ballinger; Merrill's Atlas of radiographic positions and radiological procedures. Ninth Edition, 2005, Mosby-Year Book, Inc. 2- Frances Aitchison; Chapman & Nakielny, A guide to radiological procedures. Fifth Edition, 2009. Saunders Elsevier. 3- The Royal College of radiologists (2005) Standards for intravenous Iodinated contrast Administration to Adult Patients. London: The Royal College of radiologists.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	European Society of Urogenital Radiology Contrast Me Safety Committee (2007) ESUR guidelines on cont media version 6.0. www.esur.org.

Course Description Form

1. Course Name:
Medicine and Surgery
2. Course Code:
3. Semester / Year:
second semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
1 hours theory and 3 hours practical in a week 60 hours
7. Course administrator's name (mention all, if more than one name)
Name: Dr.marowa Ali Email: marowa.odda@atu.edu.iq
8. Course Objectives

Course Objectives	**Common and special.** 1- The most important signs and symptoms for each system e.g. digestive-Respiratory-Urinary and skeletal system……etc. 2- Methods of diagnosis of different medical and surgical diseases e.g.Radiological-laboratica- and appartical or instrumental e.g. gastro-scope, cystoscope…..etc. 3- Methods of treatment and prevention of different diseases (medical+surgical (conservative and surgical treatment. 4- Effects of radiation on different system of body.

9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Student will learned the Temperature:-types-measuring(thermometer).	**Temperature:-types-measuring(thermometer).**	Lecture, discussion And scientific films	Oral tests
2	4	Student will learned the Food poisoning: types +treatment	**Food poisoning: types +treatment**	Lecture, discussion And scientific Films	Daily examination

3	4	Student will learned the Haematemesis-Melaena causes and treatment. Peptic ulcer of stomach(G.U)and duodenum.	**Haematemesis-Melaena causes and treatment. Peptic ulcer of stomach(G.U)and duodenum**	Lecture, discussion And scientific films	Daily examination
4	4	Student will learned the Hernias of diaphragm: causes and treatment.	**Hernias of diaphragm: causes and treatment.**	Lecture, discussion And scientific films	Daily examination
5	9	Student will learned the Intestinal obstruction (I.O):Radiological diagnosis. Appendicitis:Ss/Ss+treatment.	**Intestinal obstruction (I.O):Radiological diagnosis. Appendicitis:Ss/Ss+treatment.**	Lecture, discussion And scientific films	Daily examination
6	4	Student will learned the Jaundice: types +causes +investigations. Ascites :types +causes +investigations	**Jaundice: types +causes +investigations. Ascites :types +causes +investigations Jaundice: types +causes +investigations. Ascites :types +causes +investigations**	Lecture, discussion And scientific films	Daily examination
7	4	Student will learned the Hydatid cyst: in kidney-liver and lungs.	**Hydatid cyst: in kidney-liver and lungs.**	Lecture, discussion And scientific films	Daily examination
8	4	Student will learned the Bronchial Asthma: causes and treatment. Respiratory diseases: Ss/Ss Haemoptysis:- Causes+ investigations	**Bronchial Asthma: causes and treatment. Respiratory diseases: Ss/Ss Haemoptysis:- Causes+ investigations**	Lecture, discussion And scientific films	Daily examination
9	4	Student will learned the Pheumonia + pulmonary Tuberculosis(T.B) Pleural effusion +ca-lung	**Pheumonia + pulmonary Tuberculosis(T.B): Pleural effusion +ca-lung**	Lecture, discussion And scientific films	Daily examination
10	4	Student will learned the Urinary Tract diseases: Ss/Ss Haematuria:- Radiological and lab .examination (Microscopical).	**Urinary Tract diseases: Ss/Ss Haematuria:- Radiological and lab .examination (Microscopical).**	Lecture, discussion And scientific Films	Daily examination
11	4	Student will learned the Allergy in general. Drugs-Allergy:Ss/Ss. Sinusitis	**Allergy in general. Drugs-Allergy:Ss/Ss. Sinusitis**	Lecture, discussion And scientific films	Daily examination
12	4	Student will learned the Wounds: types+	**Wounds: types+ Ss/Ss + treatment in general.**	Lecture, discussion	Daily examination

		Ss/Ss + treatment in general.		And scientific films	
13	4	Student will learned the Burns: degrees (percentage on surface) and depth +treatment +complications	**Burns: degrees (percentage on surface) and depth +treatment +complications**	Lecture, discussion And scientific films	Daily examination
14	4	Student will learned the Gangrene types+ Ss/Ss + treatment in general.	**Gangrene types+ Ss/Ss treatment in general.**	Lecture, discussion And scientific film	Daily examination
15	4	Student will learned the Shock: types + Ss and Ss +treatment.	**Shock: types + Ss and Ss +treatment.**	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:

imaging anatomy

2. Course Code:

3. Semester / Year:

second semester , second stage

4. Description Preparation Date:

28/9/2026

5. Available Attendance Forms:

Theoretical and practical

6. Number of Credit Hours (Total) / Number of Units (Total)

2 hours theory and 4 hours practical in a week
75 hours

7. Course administrator's name (mention all, if more than one name)

Name: shahad ahamad
Email: shahad.bkhaet.idi10@atu.edu.iq

8. Course Objectives

Course Objectives	**The common and special:** The studies of the structure of the whole of the system of the body of the human which are appear in the special X-ray procedure and with CT and MRI imaging.

9. Teaching and Learning Strategies

Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6	Student will learned the Upper limb bone and shoulder joint, scapula bone and elbow joint and wrist joint by CT imaging and MRI.	Upper limb bone and shoulder joint, scapula bone and elbow joint and wrist joint by CT imaging and MRI.	Lecture, discussion And scientific films	Oral tests
2	6	Student will learned the Lower limb bone and pelvis bone and Hip joint and femur and Knee joint, pattela and leg Ankle joint, tarsal bone, meta tarsal, toe's with	Lower limb bone and pelvis bone and Hip joint and femur and Knee joint, pattela and leg Ankle joint, tarsal bone, meta tarsal, toe's with CT imaging..	Lecture, discussion And scientific Films	Daily examination

		CT imaging..			
3	6	Student will learned the Study the structure of the skull bone with CT imaging.	Study the structure of the skull bone with CT imaging.	Lecture, discussion And scientific films	Daily examination
4	6	Student will learned the Temporal bone and sella turcica with conventional x ray and CT imaging.	Temporal bone and sella turcica with conventional x ray and CT imaging	Lecture, discussion And scientific films	Daily examination
5	6	Student will learned the Anatomy of the brain with conventional x ray and CT imaging..	Anatomy of the brain v conventional x ray and imaging.	Lecture, discussion And scientific films	Daily examination
6	6	Student will learned the Study the structure of vertebral column and Spinal cord by CT imaging	Study the structure of vertebral column and Spinal cord by CT imaging	Lecture, discussion And scientific films	Daily examination
7	6	Student will learned the Study the chest, ribs with conventional x ray and CT imaging.	Study the chest, ribs with conventional x ray and CT imaging.	Lecture, discussion And scientific films	Daily examination
8	6	Student will learned the Study the bronchial position and pericardium with conventional x ray and CT imaging.	Study the bronchial position and pericardium with conventional x ray and CT imaging.	Lecture, discussion And scientific films	Daily examination
9	6	Student will learned the Study the heart and mediastina by conventional x ray and CT imaging.	Study the heart and mediastina by conventional x ray and CT imaging.	Lecture, discussion And scientific films	Daily examination
10	6	Student will learned the Anatomy of the gastro intestinal tract and and small, large intestinal and Anatomy inter in abdomen spleen, liver, pancreasin in CT and MRI imaging	Anatomy of the gastro intestinal tract and and small, large intestinal and Anatomy inter in abdomen spleen, liver, pancreasin in CT and MRI imaging	Lecture, discussion And scientific Films	Daily examination
11	6	Student will learned the Oesophagus, stomach and duodenum and biliary tract system in CT and MRI imaging	Oesophagus, stomach and duodenum and biliary tract system in CT and MRI imaging	Lecture, discussion And scientific films	Daily examination
12	6	Student will learned the Anatomy inter in abdomen spleen, liver, pancreasin in CT and MRI imaging.	Anatomy inter in abdomen spleen, liver, pancreasin in CT and MRI imaging	Lecture, discussion And scientific films	Daily examination
13	6	Student will learned the Anatomy of the	Anatomy of the urinary system in kidney with	Lecture, discussion	Daily examination

		urinary system in kidney with conventional x ray and CT imaging	conventional x ray and CT imaging	And scientific films	
14	6	Student will learned the Ureter and bladder with conventional x ray and CT imaging.	Ureter and bladder v conventional x ray and imaging.	Lecture, discussion And scientific film	Daily examination
15	6	Student will learned the Anatomy of the uterus, uterus tube in x ray and CT and MRI imaging..	Anatomy of the uterus, uterus tube in x ray and CT and MRI imaging.	Lecture, discussion And scientific films	Daily examination

11. Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. Anatomy for Diagnostic Stephen Ryan , Michael (MMcN) Sarah, Emma, Jack and Nick (SE) . 2. Practical Radiological Anatomy Sarah McWilliams. 3. Pocket Atlas of Sectional Anatomy Computed Tomography and Magnetic Resonance Imaging. Torsten B. Moeller, M.D. Am Caritas Radiogravic anatomy Frank Slaby, Euggene R.Jacobs
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Biostatic
2. Course Code:
3. Semester / Year:
second semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory in a week 30 hours
7. Course administrator's name (mention all, if more than one name)
Name: ashwaq abdulsada Email: ashwaq.sada.idi12@atu.edu.iq
8. Course Objectives

Course Objectives	General objectives:- Student of statistical data and the school year on the processing and analysis Student at the end of reach the right conclusions, and prepare statistical forms Special Objectives: students:- Dealing with statistical data Interact and learn statistical measurements of health and life. Organize statistical form and form-related health incidents such as births, deaths and diseases.
9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Student will learned the Define statistics. Data collection methods	Define statistics. Data collection methods.	Lecture, discussion And scientific films	Oral tests
2	2	Student will learned the Presentation of statistical data and as, preparing form (not	Presentation of statistical data and as, preparing form (not classified)	Lecture, discussion And scientific Films	Daily examination

		classified) questionnaire	questionnaire		
3	2	Student will learned the Frequency distributions of data representation "tabular view" classified "iterative" distributions tables presentation – histogram, frequency curve, frequency polygon	Frequency distributions of data representation "tabular view" classified "iterative" distributions tables presentation – histogram, frequency curve, frequency polygon	Lecture, discussion And scientific films	Daily examinatio n
4	2	Student will learned the Measures of central tendency — the arithmetic means. Broker. Mode.	Measures of central tendency — the arithmetic means. Broker. Mode	Lecture, discussion And scientific films	Daily examinatio n
5	2	Student will learned the Introduction to sampling theory "meaning and causes of their choice..	Introduction to sampl theory "meaning and caus of their choice	Lecture, discussion And scientific films	Daily examinatio n
6	2	Student will learned the Life, for statistics, the average, mortality statistics	Life, for statistics, the average, mortality statistics	Lecture, discussion And scientific films	Daily examinatio n
7	2	Student will learned the Fertility statistics.	Fertility statistics	Lecture, discussion And scientific films	Daily examination
8	2	Student will learned the Disease statistics life tables.	Disease statistics life tables	Lecture, discussion And scientific films	Daily examinatio n
9	2	Student will learned the Definition of health statistics and confiscation.	Definition of health statistics and confiscation	Lecture, discussion And scientific films	Daily examinatio n
10	2	Student will learned the Fields of statistics	Fields of statistics	Lecture, discussion And scientific Films	Daily examinatio n
11	2	Student will learned the The causes of death statistics (medical certificate, the cause, death, death certificate)	The causes of death statistics (medical certificate, the cause, death, death certificate)	Lecture, discussion And scientific films	Daily examinatio n
12	2	Student will learned the Health Organization statistics.	Health Organization statistics	Lecture, discussion And scientific films	Daily examinatio n
13	2	Rates and most suitable for hospitals and patients. Days of treatment. Period of stay (days	Rates and most suitable for hospitals and patients. Days of treatment. Period of stay (days	Lecture, discussion And scientific films	Daily examinatio n
14&15	2	Student will learned the Ureter and bladder with conventional x ray and CT imaging.	The rate of family conce Rate entry	Lecture, discussion And scientific films	Daily examinatio n
11. Course Evaluation					

The grade distribution is as follows: 30 marks for monthly and daily exams for the first semester. 70 marks for final exams
12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Computer Application (2)
2. Course Code:
3. Semester / Year:
second semester , second stage
4. Description Preparation Date:
28/9/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory and 4 hours practical in a week 30 hours
7. Course administrator's name (mention all, if more than one name)
Name: wasean mahamed Email: wasean.najum@atu.edu.iq
8. Course Objectives

Course Objectives	**General objective: To equip the student with the skills to use various computer applications.** **Specific objective: To enable the student to distinguish between different types of software that can be used.**
9. Teaching and Learning Strategies	
Strategy	1-Theoretical lessons.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1 -3	2	Student will learned the The concept of networks and their types The concept of the Internet, how it works, a description of the main screen and its components, and how to connect to the World Wide Web (Web). Utilizing popular search engines such as Yahoo and Google. Learning how to search for and access information. The concept of networks and their types Learning how to search for and access information.	The concept of networks and their types The concept of the Internet, how it works, a description of the main screen and its components, and how to connect to the World Wide Web (Web). Utilizing popular search engines such as Yahoo and Google. Learning how to search for and access information.	Lecture, discussion And scientific films	Oral tests
4-8	2	Student will learned the Excel program: Understanding the program's concept, benefits, features, and how to use it. Familiarizing yourself with the main screen, its components, and the various menus and tools it contains. Understanding the cell: basic data types and how to enter them. • How to save a workbook or worksheet: Close the program and close the file. • Open the saved file: Enter data and perform simple calculations. Learn	Excel program: Understanding the program's concept, benefits, features, and how to use it. Familiarizing yourself with the main screen, its components, and the various menus and tools it contains. Understanding the cell: basic data types and how to enter them. • How to save a workbook or worksheet: Close the program and close the file. • Open the saved file: Enter data and perform simple calculations. Learn how to format and structure data within a single cell or a	Lecture, discussion And scientific Films	Daily examination

		how to format and structure data within a single cell or a group of cells. • Learn how to collect data or groups of cells in different formats, and how to sort data. • Use some of the functions provided by the program, such as SUM, Min, Max, COUNT, SQRT, AVE, and other useful related statistical functions. • Understanding the editing process offered by the program, and how to copy or move data. • Understanding the concept of copying calculations, as well as the concept of relative and absolute cells. • Controlling cell display: changing its style and formatting using formatting tools. • Working with charts and how to convert numeric and text data into various types of charts using the Chart Wizard, and learning how to make the modifications and edits provided by the program. • Learning how to add or delete rows or columns in the worksheet and how to print numeric data or charts.	group of cells. • Learn how to collect data or groups of cells in different formats, and how to sort data. • Use some of the functions provided by the program, such as SUM, Min, Max, COUNT, SQRT, AVE, and other useful related statistical functions. • Understanding the editing process offered by the program, and how to copy or move data. • Understanding the concept of copying calculations, as well as the concept of relative and absolute cells. • Controlling cell display: changing its style and formatting using formatting tools. • Working with charts and how to convert numeric and text data into various types of charts using the Chart Wizard, and learning how to make the modifications and edits provided by the program. • Learning how to add or delete rows or columns in the worksheet and how to print numeric data or charts.		
9-15	2	Student will learned the • SPSS Statistical Software: Program Concept and Operation • Data Analysis Steps and Familiarization with the Main Screen Components • Data Input, Saving,	• SPSS Statistical Software: Program Concept and Operation • Data Analysis Steps and Familiarization with the Main Screen Components • Data Input, Saving, and	Lecture, discussion And scientific films	Daily exami nation

		and Retrieval; Data Types, Sorting, and Swapping • Inserting Variables or Cases, Merging and Analyzing Files • Conducting Non-Parametric Tests	Retrieval; Data Types, Sorting, and Swapping • Inserting Variables or Cases, Merging and Analyzing Files • Conducting Non-Parametric Tests		

11.Course Evaluation

The grade distribution is as follows: 40 marks for monthly and daily exams for the first semester. 60 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	