

Academic Program Description

University Name: Al-Farabi University

College/Institute: College of Health and Medical Technologies

Scientific Department: Department of Dental manufacturing techniques

Academic or Professional Program Name: Bachelor's

Final Degree Name: Bachelor of Science in Medical Laboratory Technologies (Lab Technician)

Academic System: Semester system

File Preparation Date: 2025-2026

File Completion Date: 30/8/2026

Head of Department:

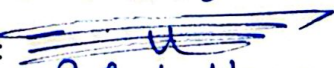
Scientific Assistant:

File audited by

Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University Performance Division

Date: 30.8.2026

Signature: 
Prof. dr. Hanaan Hammoud

Dean's Approval:

Ministry of Higher Education and

Scientific Research

Alfarabi University

Faculty of Health and Medical Technologies

Department of Dental Technology



Academic Programs Description

2026-2025

1. Vision

The department should have a clear vision and a defined mission, and be a distinguished scientific authority in the field of radiology technology. It should also possess firmly established values that serve as the compass guiding its strategic decisions and daily practices in developing creative and innovative ideas, projects, and plans to enhance radiology technology education.

2. Program Mission

Preparing study programs that conform to the standards adopted by international educational institutions, to prepare specialized technical personnel equipped with the highest levels of ethical and professional training. Which effectively contributes to supplying the labor market with qualified personnel capable of competing locally and globally, and working to enhance the role of the university as an institution that contributes to the advancement of scientific research, community service, and the development of the university's human and financial resources.

3. Program Objectives

1. Graduates will understand the fundamental terminology and concepts of radiology, identify the components of radiological equipment, and review the principles of occupational safety.
- 2- They will learn about the use of modern technologies in diagnostic radiology, ultrasound, magnetic resonance imaging (MRI), nuclear medicine, computed tomography (CT), and radiotherapy
- 3- They will educate students about the risks of radiation exposure, how to protect staff and patients from these risks.
- 4- They will train students in compassionate and efficient healthcare delivery to all patient groups, within their respective specialties in healthcare institutions.
- 5- Graduates will participate in applied research studies supported by artificial intelligence that contribute to improving the quality of diagnostic services and analyzing research results related to radiation technologies.
- 6- Graduates will evaluate the efficiency of radiological equipment, assess the quality of diagnostic outputs, and conduct ongoing reviews of their professional performance in accordance with ethical principles and safety standards.
- 7- Graduates will design customized imaging protocols, develop technological solutions to reduce radiation doses, and participate in developing awareness programs on radiation safety

4. Program Accreditation

Newly established department / First phase only

5. External influences

6. Program Structure

Reviews*	Percentage	Credit Hours	Number of cycles	Program Structure
nothing	%16.3	7	3	Requirements of the institution
nothing	%4.7	2	1	College Requirements
nothing	%79	34	11	Department Requirements
nothing	-----	—	—	Summer Training
				Other

Study Plan for the Department of Radiology

Grades	Course or Course Code	Course Name			Unites
			Theoretical	Practical	
First stage Semester 1		Skeletal Anatomy	2	3	3
		General Physics	2	3	3
		General Physiology	2	3	3
		Biology	2	3	3
		General Chemistry	2	3	3
		Computer Principles 1	1	2	2
		Human Rights and Democracy	2	-	2
		English Language	2	-	2
First stage Semester 2		Anatomy of Body Systems	2	4	3
		Atomic physics	2	4	3
		Functional Physiology	2	3	3
		Radiobiology	2	3	4
		Fundamentals of Nursing	2	3	4

		Medical Terminology	2	-	2
		Arabic language	2	-	2

1. Expected learning outcomes of the program

Knowledge

- 1- The student will learn about human anatomy, the functions of body systems, and medical terminology.
- 2- The student will understand the effects of ionizing and non-ionizing radiation on human cells and tissues, and the principles of radiation safety.
- 3- The student will learn about different types of medical imaging techniques, such as X-rays, CT scans, MRI, and ultrasound, and their respective protocols.
- 4- The student will learn the technical principles of operating and configuring X-ray equipment according to the type of examination.

Skills

- 1- The student will be able to identify the parts of the human body and their functions.
- 2- The student prepares medical imaging equipment and adjusts it according to the type of examination required
- 3- The student applies different imaging modes to obtain clear, accurate, and high-quality radiographs before submitting them to the specialist doctor
- 4- The student can communicate with the patient and explain the nature of the examination and the necessary procedures for examination and safety.

Values

1. Adheres to professional ethics and maintains the confidentiality of patients' radiological information, especially with critical and special cases.
2. Takes responsibility during working hours and field training, and applies radiation safety standards.
3. Demonstrates respect and cooperation with medical staff and patients while providing services.
4. Commits to self-development and staying up-to-date with advancements in medical imaging, as well as supporting the professional development of newly appointed staff.

2. Teaching and Learning Strategies

1. Lectures
2. Dialogue and Discussion
3. Cooperative Learning (Group Classes)
4. Brainstorming
5. Reciprocal Teaching
6. Posting lectures on the college or department website, for all professors and all courses
7. Using presentation and audio equipment
8. Writing research papers and reports in English
9. Speaking English in class and during participation
10. Conducting research and experiments to achieve the Sustainable Development Goals

3. Evaluation methods

1. Questions and answers during lectures.
2. Daily, unannounced quizzes.
3. Evaluation of research and writing in terms of style, expression, and spelling.
4. Questions to assess listening and attention skills in English.
5. Student participation in evaluating peer performance.
6. Practical assessment tests in listening, speaking, and reading.
7. Monthly and term exams.
8. Final written exams.

1– Faculty

Faculty members

Faculty Preparation		Requirements/Skills (if any)		Specialization,		Academic Rank,
lecturer	Stafe			private	General	
	√			Applied Nuclear Physics	Applied Nuclear Physics	Prof. Dr. Khalid Hadi Mahdi
	√			General medicine, gynecology, and infertility	General medicine, gynecology, and infertility	Prof. Dr. Abdul-Adheem Yousef Jassim
	√			Life Sciences: Microbiology	Life Sciences: Microbiology	Assistant Lecturer Mohammed Nassif Jassim Mohammed
	√			Laser Physics and Electro-Optics	Laser Physics and Electro-Optics	Assistant Lecturer Taqa Akram Khalifa Hassan
√				Atomic Physics	Atomic Physics	Dr. Huda Razzaq Katafa

	√			Life Sciences: Biotechnology	Life Sciences: Biotechnology	Assistant Professor Dr. Ahmed Falyiyh Hasan
	√			General Chemistry	General Chemistry	Assistant Lecturer Hussam Ali Atallah Saeed
	√			Nuclear Physics	Nuclear Physics	Dr. Ali Khalid Aboud
	√			Arabic Language: Modern Literature	Arabic Language: Modern Literature	Assistant Professor Dr. Lamia Hussein Ali
√				Life Sciences: Pathological Analysis	Life Sciences: Pathological Analysis	Assistant Lecturer Khattab Azhar Musleh Hamad
	√			General Law	General Law	Prof. Dr. Azhar Musleh Hamad Obaid
	√			Physics: Medical Physics	Physics: Medical Physics	Assistant Lecturer Haider Mahmoud Hassan

Professional Development

Mentoring new faculty members

- 1- Work on diversifying classroom management methods and giving lectures
- 2- The new faculty is exposed to the visit of the head of the department and the old teachers during the lectures
- 3- Conducting personal interviews to know the teaching competence and skill in teaching
- 4- Publishing research in international journals with an impact factor, writing literature, and participating in workshops and conferences

Professional development of faculty members

Encouraging and training instructors to develop curriculum content, incorporate scientific advancements, and utilize diverse teaching and learning strategies (outcome-based learning, project-based learning, collaborative learning, problem-based learning, community-based learning, and self-directed learning), as well as assessment mechanisms and methods, through a training plan in collaboration with the university's Continuing Education Center. Active participation in the Ministry's platforms, particularly eduba, is also encouraged to enhance faculty members' ability to use smart learning platforms, publish research in reputable journals, stay informed about modern teaching strategies, and explore the use of artificial intelligence and sustainable development.

Acceptance Criteria

Students graduating from the scientific branch of secondary school are eligible to enroll in the Radiology Technology Department at the university after successfully completing their secondary education. Admission to the morning program requires a minimum grade of 70%, and the department accepts only graduates of the scientific branch of secondary school.

The most important sources of information about the program

1. Files stored in the department.
2. The curriculum approved by the Ministry of Higher Education and Scientific Research.
3. Recommendations from the Quality and Academic Performance Committees.
4. The official website of Al-Farabi University College.

5. Program Development Plan

1. Periodic review of the curriculum.
2. Preparation of annual course reports, including a development plan for each course.
3. Implementation of internal and external review processes for the program.
4. Active participation of program beneficiaries in program development.
5. Conducting workshops and advanced practical training courses.
6. Organizing summer training hours to enhance skills.

Curriculum Skills Outline						
Learning outcomes required from the program						
Emotional and value goals	Program Skills Objectives	Cognitive goals	Basic or optional	Course Name	Course	Year/

4c	3c	2c	1c	4b	3b	2b	1b	4a	3a	2a	1a			Code	Level
√	√			√	√	√	√	√	√	√	√	Specialized	Anatomy of skeleton		First stage Semester 1
√	√			√	√	√	√	√	√	√	√	Assistance	General physics		
√	√			√	√	√	√	√	√	√	√	Assistance	General physiology		
√	√			√				√	√	√		Assistance	Biology		
√	√			√				√	√	√		General	General chemistry		
√	√	√	√	√	√	√		√	√	√	√	General	Computer principles1		
√	√	√	√	√				√	√	√	√	General	Human rights and democracy		
√	√	√	√	√	√	√	√	√	√	√		Specialized	English language		
√	√			√	√	√		√	√	√	√	Assistance	Anatomy of body systems		First stage Semester 2
√	√	√			√	√			√	√		Assistance	Physics of atom		
√	√			√	√			√	√			Assistance	Systemic physiology		
√	√			√	√	√		√	√	√	√	General	Radiobiology		
√		√		√	√			√	√	√		Specialized	Principles of Nursing		
√		√		√	√			√	√	√		Assistance	Computer principles2		
√	√	√	√	√	√	√	√	√	√	√		Assistance	Medical Terminology		
√	√	√	√	√	√	√	√		√	√	√	Assistance	Arabic Language		

Course Description Form

1. اسم المقرر					
Dental Prosthetics Technology					
2. رمز المقرر					
DT					
3. الفصل / السنة					
First and Second Semesters, 2025-2026					
4. تاريخ إعداد هذا الوصف					
12/8/2026					
5. أشكال الحضور المتاحة					
Theoretical and Practical					
6. عدد الساعات الدراسية (الكلية) / عدد الوحدات (الكلية)					
59 hours / 38 credits					
7. اسم مسؤول المقرر الدراسي (إذا أكثر من اسم يذكر)					
الاسم: م.د لقاء صباح حسن سعد الايمل: Liqasabah2009@gmail.com					
8. اهداف المقرر					
Course Objectives					
• تزويد الطالب بالمهارات النظرية..... • تزويد الطالب بالمهارات العملية... • تطوير المعلومات العامة للطالب.....					
9. استراتيجيات التعليم والتعلم					
Strategy					
1- المحاضرات النظرية 2- المختبرات العملية 3- الحلقات النقاشية 4- السمنارات 5- التقارير العلمية					
10. بنية المقرر					
Assessment Method	Learning Method	Unit / Topic	Required Learning Outcomes	Hours	Week
امتحان نظري + عملي	Theoretical / Practical	Course Topics	Theoretical / Practical	59	الكورس الاول + الكورس الثاني المرحلة الاولى
11. تقييم المقرر					
1- امتحانات نظرية 2- امتحانات عملية					

- 3- سمنارات
4- حلقات نقاشية

12. مصادر التعلم والتدريس	
Prescribed textbooks	Required Textbooks (if any)
Main sources	Main References (Sources)
Scientific journals indexed in Scopus	Recommended Supporting Books and References (Scientific Journals, Reports, etc.)
Electronic references	Electronic References and Websites

Course Description Form

1. Course Name	
Medical Terminology	
1. Course Code	
2. Semester/Year	
Semester 2/First Year	
3. Date of Preparation of this Description	
2026	
4. Available Attendance Forms	
In-person (Classroom)	
5. Total Credit Hours / Total Units	
Total Hours 30 / Units 2	
6. Name of Course Instructor (If more than one, please specify)	
Name: M.M. Taqa Akram Khalifa Hassan Email: taqa.akram@alfarabiuc.edu.iq	
2. Course objectives	
Objectives of the course material	Course Objectives: General Objective: 1. Identify the four word elements used to build medical words. 2. Divide medical words into their component parts. 3. Apply the basic rules to define and build medical words. 4. Locate the pronunciation guidelines chart and interpret pronunciation marks. 5. Pronounce medical terms 6. Determine how to link combining forms and word roots to various types of suffixes 7. List and identify the terms related to direction, position, and planes of the body. 8. Describe pathological conditions, diagnostic and therapeutic procedures, and other terms related to the body system.
3. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the student's role and transform him from a recipient and listener of information to a central focus in his learning process, where learning takes place through work, research, and the student's self-reliance in acquiring knowledge .Engaging students in information analysis

10.Course Structure					
Theoretical Component:					
Assessment Method	Teaching Method	Learning Outcomes	Topic	Hours	Week
Discussion	Theoretical lecture	Understanding and comprehension	Structural analysis: Basic Elements of a Medical Word	2	1
Homework	Theoretical	Understanding and	suffixes	2	2

		lecture	comprehension			
Quiz	Theoretical lecture	Understanding and comprehension	Prefixes	2	3	
Discussion	Theoretical lecture	Understanding and comprehension	Roots , Word terminals , Conditions	2	4	
Quiz	Theoretical lecture	Understanding and comprehension	Terms concerning Body Structure	2	5	
Homework	Theoretical lecture	Understanding and comprehension	Terms concerning Integumentary System	2	6	
Written Exam	Theoretical lecture	Understanding and comprehension	Terms concerning Digestive System	2	7	
Discussion	Theoretical lecture	Understanding and comprehension	Terms concerning Respiratory System	2	8	
Homework	Theoretical lecture	Understanding and comprehension	Terms concerning the skin & its appendages	2	9	
Quiz	Theoretical lecture	Understanding and comprehension	Terms concerning Cardiovascular System	2	10	
Discussion	Theoretical lecture	Understanding and comprehension	Terms concerning Blood, Lymph, and Immune Systems	2	11	
Quiz	Theoretical lecture	Understanding and comprehension	Terms concerning Musculoskeletal System	2	12	
Homework	Theoretical lecture	Understanding and comprehension	Terms concerning the endocrine system	2	13	
Written Exam	Theoretical lecture	Understanding and comprehension	Terms concerning the special senses	2	14	
Discussion	Theoretical lecture	Understanding and comprehension	Terms concerning the oncology	2	15	

11.Course Assessment

Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12.Learning and Teaching Resources

Required Textbooks (if any)	Oxford English language reference
Main References (Sources)	1. David Andersson, <i>Medical Terminology: The Best and Most Effective Way to Memorize, Pronounce and Understand Medical Terms</i> : Second Edition 2-Barbara A. Gyls <i>Medical Terminology Systems: A Body Systems Approach</i> Eighth Edition
Recommended Supporting Books and References (scientific journals, reports, etc.)	English handbook and study guide
Electronic References and Websites	

1. Course Name :	
Arabic language	
2. Course Name:	
3. Semester /Year:	
Semester (2)/ Stage (1)	
4. Date this description was prepared2025/9/1 :	
2026	
5. Available attendance forms: Classroom attendance	
Group classroom attendance	
6. study hours(Total number)/ units(Total number):	
Total number of hours 30 / 2 units	
7. The name of the course instructor (if there is more than one) should be mentioned.	
Name :Dr. Lamia Hussein Ali Email :dr.lamya@cois.uobaghdad.edu.iq	
Name:Dr.Enas Abbas Email: inas.abbas@coeduw.Uobaghdad.edu.iq	
8. Course objectives	
Course objectives	1– After learning Arabic language and literature in the academic field, one of the features that gives Arabic its unique character and distinction compared to other languages is its vast linguistic, literary, and artistic resources, encompassing a wide range of topographical, historical, and cultural dimensions. Therefore, the department strives to empower students with knowledge and expertise related to the Arabic language and its arts. 2– Developing the ability to provide educational guidance and engage with the contemporary human mind. 3– Teaching students Arabic sciences, literature, and arts in a systematic manner that leads to a deep understanding of Arabic grammar and the secrets of its expressive power. This understanding connects to comprehending the Holy Quran and exploring its underlying reasons. Furthermore, the program equips students with the skills to analyze various types of literary texts. 4– Develop expressive abilities and cultivate literary taste and aesthetic sense through the arts of rhetoric and refined literary forms. 5 – Produce well–rounded graduates, in addition to their specialized knowledge, meet the demands of the job market in the fields of culture and media .
9. Teaching and learning strategies	

strategy	1- Identifying resources that align with the course content and objective 2- Distributing assignments among students. 3- Maintaining a daily and monthly grade record for all students. 4- Having the instructor and assigned students explain each topic. 5- Administering daily quizzes to assess student understanding of the material. 6- Continuously evaluating student participation in class discussions. 7- Administering monthly exams.
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10. Course structure

Evaluation method	Learning method	Unit name and topic	Required learning outcomes	Hours	Week
Written test, participation, and daily quiz	The lecture	Introduction to Linguistic Errors – The Taa Marbuta, Tawilah, and Taa Maftuha	The student should become familiar with	2	1
Written test, participation, and daily quiz	The lecture	Rules for Writing Alif Mamdudah and Alif Maqsurah – Sun and Moon Letters	The student should become familiar with	2	2
Written test, participation, and daily quiz	The lecture	Dhad and Dhaa	The student should become familiar with	2	3
Written test, participation, and daily quiz	The lecture	Writing the Hamza	The student should become familiar with	2	4
Written test, participation, and daily quiz	The lecture	Punctuation Marks	The student should become familiar with	2	5
Written test, participation, and daily quiz	The lecture	Nouns and Verbs and Distinguishing Between Them	The student should become familiar with	2	6
Written test, participation, and daily quiz	The lecture	Objects	The student should become familiar with	2	7
Written test, participation, and daily quiz	The lecture	Numbers	The student should become familiar with	2	8

Written test, participation, and daily quiz	The lecture	Applications of Common Linguistic Errors	The student should become familiar with	2	9+10
Written test, participation, and daily quiz	The lecture	Nun and Tanween – Meanings of Prepositions	The student should become familiar with	2	11
Written test, participation, and daily quiz	The lecture	Formal Aspects of Administrative Discourse	The student should become familiar with	2	12
Written test, participation, and daily quiz	The lecture	The Language of Administrative Discourse	The student should become familiar with	2	13+14
Written test, participation, and daily quiz	The lecture	Examples of Administrative Correspondence	The student should become familiar with	2	15
Course evaluation					.11
Written and written work The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, midterm, and monthly exams. The annual coursework grade is 50%. The final coursework grade is 50%.					
Learning and teaching resources					.12
The Holy Quran			Required textbooks and curriculum, if available		
Several Interpretations			Main review of sources		
Books on Arabic Grammar			The second review books recommended by scientific journals and reports		
Modern and Comparative Literature Arabic Rhetoric			Electronic references and websites		