



Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation

Academic programs and course description to Department of Medical

Introduction

The educational program is a coordinated and organized package of courses that include procedures and experiences organized into study modules. The primary purpose of the program is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and programs, such as the External Examiner Program.

The academic program description provides a brief summary of the program's main features and courses, indicating the skills students are expected to acquire based on the program's objectives. The importance of this description is evident in that it represents the cornerstone for obtaining program accreditation. It is written by faculty members under the supervision of the academic committees in the academic departments.

This guide, in its second edition, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the new developments and changes in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, semester) in addition to adopting the description of the academic program circulated pursuant to the letter of the Department of Studies TM3/2906 dated 5/3/2023 with regard to programs that adopt the Bologna process as the basis for their work.

In this context, we cannot but emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth running of the educational process.

Concepts and terms:

Academic Program Description: The academic program description provides a concise summary of the program's vision, mission, and objectives, including a detailed description of the targeted learning outcomes based on specific learning strategies

Course Description: Provides a concise summary of the course's key features and the learning outcomes expected of the student, demonstrating whether the student has made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious vision for the future of the academic program to be an advanced, inspiring, motivating, realistic, and applicable program

Program mission: It briefly explains the objectives and activities required to achieve them, and also identifies the program's development paths and directions.

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

Curriculum structure: All courses/subjects included in the academic program according to the approved learning system (semester, annual, Bologna track), whether required by (ministry, university, college, or scientific department), along with the number of academic units.

Learning outcomes: A consistent set of knowledge, skills, and values acquired by a student after successfully completing the academic program. Learning outcomes for each course must be defined in a manner that achieves the program's objectives.

Teaching and learning strategies: These are the strategies used by faculty members to develop student teaching and learning. They are plans followed to achieve learning objectives. They describe all classroom and extracurricular activities to achieve the program's learning outcomes.

نموذج وصف البرنامج الأكاديمي (2025-2026)

اسم الجامعة: كلية صدر العراق الجامعة

الكلية/المعهد: كلية صدر العراق الجامعة

القسم العلمي: قسم هندسة تقنيات الاجهزة الطبية

اسم البرنامج الأكاديمي او المهني: هندسة تقنيات الاجهزة الطبية

اسم الشهادة النهائية: بكالوريوس في هندسة تقنيات الاجهزة الطبية

النظام الدراسي: الوحدات/ نظام بولونيا

تاريخ اعداد الوصف: 2026 / ٩ / ١٠

تاريخ ملء الملف: 2026 / ٩ / ١٨



التوقيع : أ.د. حسين عبد المنعم داوود

اسم معاون العلمي:

التاريخ: 2026 / 2 / 2١



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التاريخ: 2026 / 2 / 2١

دقق الملف من قبل

شعبة ضمان الجودة والأداء الجامعي

اسم مدير شعبة ضمان الجودة والأداء الجامعي: م.م. ميس مثني موفق

التاريخ: 2026 / ٩ / ١٠

التوقيع



مصادقة السيد العميد

1. Program vision

Preparing scientific, engineering and technical outputs that possess the continuous progress and the qualifies them to keep pace with that expertise increasing the efficiency of thus ,development in the field of medical devices dealing with these devices.

2. Program message

Providing material and human resources and working to develop the efficiency to compete and the ability a way that contributes to increasing in of graduates labor market meet the needs of the.

3. Program objectives

1. Achieving the necessary development in terms of application and s students, which contributes to their ability 'knowledge for the department to compete in the labor market.
2. Achieving quality and programmatic and academic accreditation in the field of medical device technologies.
3. Working to find ways of communication between the department and similar departments in universities with academic excellence with the aim of providing students with scientific and professional skills.
4. Providing efficient and qualified teaching staff to raise the academic level s students'of the department.
5. Encouraging faculty members to conduct scientific research, which enhances the academic standing of the department and college.
6. Preparing a practical training program that meets the academic and practical needs of students.

4. Program accreditation
Nothing

5. Other external influences
Nothing

6. Program structure				
* comments	percentage	Study unit	Number of courses	Program structure
First stage/Second stage/ Third stage	17.5%	22	9	Institutional requirements
-----	-----	---	-----	College requirements
First stage/Second stage/ Third stage	82.5%	99	19	Department requirements
Second stage/ Third stage	-----	-----	2	Summer training
-----	---	-----	-----	Other

7. Program description				
Credit hours		Course name	Course code	Year/Level
practical	theoretical			First stage / first semester
2	3	Fundamentals of Electrical Engineering (DC)	MIET1101	
2	2	Computer Principles	MTU1004	
0	5	Differential Mathematics	MIET1103	
4	0	Engineering Drawing	EETC102	
0	2	Democracy and human rights	MTU1006	
0	2	English Language I	MTU1002	
2	4	medicinal chemistry	MIET1107	
10	18	total		
2	3	Fundamentals of Electrical Engineering (AC)	MIET1201	First stage / second semester
2	2	Medical Physics	MIET1202	

0	3	Mechanics	MIET1203	
0	5	Integrative mathematics	MIET1204	
4	0	Engineering workshops	EETC101	
2	1	Computer Programming and Applications I	MIET1206	
0	2	Arabic language I	MTU1001	
10	16	total		
3	3	Laboratory Medical Instrumentation I	MIET2101	stage / First Second semester
2	3	Electronic circuits I	MIET2102	
2	3	electrical machines	MIET2103	
0	4	Engineering mathematics	MIET2104	
2	2	Anatomy and Physiology	MIET2105	
0	2	The crimes of the Ba'ath Regime in Iraq	MTU1007	
1	2	computer applications	MTU1005	
10	19	total		
3	3	Laboratory Medical Instrumentation II	MIET2201	stage Second/ semester Second
2	3	Electronic CircuitsII	MIET2202	
2	3	digital electronics	MIET2203	
2	2	Clinical Chemistry Instrumentation	MIET2204	
2	2	Biomedical transducers and sensors	MIET2205	
0	2	English Language II	MTU1003	
0	2	Arabic LanguageII	MTU1009	
11	11	total		
3	2	Medical Diagnostic Instrumentation I	MIET3101	Third stage First / semester
2	4	Microprocessor	MIET3102	
2	2	Electromagnetic Fields	MIET3103	
2	2	Signals and Systems	MIET3104	
2	2	Computer Programming and Applications II	MIET3105	
0	3	Project Management	MIET3106	

11	15	total		
3	2	Medical Diagnostic Instrumentation II	MIET3201	Thirdstage / Second semester
2	3	Medical Electronic Systems	MIET3202	
2	2	Medical Communication Systems	MIET3203	
2	3	Power Electronics	MIET3204	
0	2	Project I	MIET3205	
2	3	Advanced Computer Programming	MIET3206	
11	15	total		

8. Expected learning outcomes of the program		
knowledge		
in the basics of the scientific .specialization	The student acquires knowledge	1A Learning Outcomes
Identify the cognitive laws of basic academic subjects		2A Learning Outcomes
experience in the scientific evaluation of physical .problems	The student gains	3A Learning Outcomes
Deepening the student's understanding of the basics of the scientific subject		4A Learning Outcomes
Skills		
link the practical side with the theoretical side	The ability to	1B Learning Outcomes
Ability to maintain and repair various medical devices		2B Learning Outcomes
Scientific analysis skill		3B Learning Outcomes
Scientific research skill		4B Learning Outcomes
the field of medical devices	Ability to apply modern technologies in	1C Learning Outcomes
Development and design of medical devices		2C Learning Outcomes
critical thinking skill		3C Learning Outcomes
Ability to analyze and evaluate devices		4C Learning Outcomes
D Values		
Team spirit, teamwork and effective communication		Learning Outcomes 1
developments in the work environment adapt to	Ability to	2 Learning Outcomes
Continuous development and improvement, and the aspiration to keep pace with everything new in the specialty		Learning Outcomes 3
creative thinking		Learning Outcomes 4

9. Teaching and learning strategies

Lectures – e-classes – science labs – interactive lessons and discussions – seminars – study groups – workshops – cooperative learning – brainstorming.

10. Evaluation methods

Scientific reports and research – short tests – assignments – practical evaluation – final tests – semester tests – intellectual questions.

11. Faculty

Faculty members

Faculty preparation		Special requirements skills (if / (any		Specialization		Academic rank
lecturer	Staff			Specific	general	
	✓			Power Generation Engineering	Mechanical Engineering	Prof.Dr. Adnan.A.Abdulrasool
	✓			Hematopathologist, Flowcytometris	Human doctor	Asst. Prof.Dr .Faris jafaar
	✓			Communications Engineering	Electrical Engineering	Asst. Prof.Dr .Luma Fayeeg Jalil
	✓			Electronic Engineering	Electrical Engineering	Snr. Lect.Dr.Ahmed Sarhan Mohammed
	✓			Chemistry	Chemistry	Snr. Lect.Dr. Ali Jassim Hamoud
✓				Electronic engineering	Electrical Engineering	Snr. Lect.Dr. Noor Hussein
	✓			Numerical Optimization	Mathematics	Snr. Lect.Dr.Saif Ahmed Hussein

✓				Medical Physics	physics	Lect.Jassim Hafez Mohammed
	✓			embryology	Biology	Asst.Lect. Wathiq Qutaiba
✓				Power and electrical machines	Electrical Engineering	Asst.Lect.Ali Qasim AbdRasoul
	✓			Biochemistry	Chemistry	Asst.Lect.Fatima Ali Issa
	✓			Civil Engineering	Civil Engineering	Asst.Lect.Diana Mohammad Yosuf
	✓			English Poetry	English language	Asst.Lect. Dania Hussain Abdulmunem
	✓			Sociology	Sociology	Asst.Lect. Insaf Jassim Alwan
	✓			Software Engineering	Computer Engineering Technology	Asst.Lect. Zahraa Samer Saadi
	✓			Total Quality Management	Total Quality Management	Asst.Lect. Mays Muthanna Muwaffaq
	✓			Sociology	Sociology	Asst.Lect.Insaf Jassim Alwan
✓				literature	Arabic language	Asst.Lect.Maan Muzail Shihab
	✓			Biomedical Engineering	Biomedical Engineering	Engineer Muhammad Ali Adnan

Professional development

Orientation of new faculty members

Developing programs for department members, including:

1. and advisory lectures and seminars on the activities, rights and duties of faculty members, scientific research, its importance, and knowledge and educational resources.
2. Preparing in-person and online training courses and workshops aimed at developing university teaching skills, including: curriculum development, effective university teaching skills, student assessment skills, e-learning, and distance learning.

Professional development for faculty members

1. Encourage participation in scientific conferences
2. Providing training and professional development opportunities through participation in internal and external training courses.
3. Participation in development workshops held by the Ministry regarding the preparation of scientific research and publication in accredited international journals with influence .
4. Using technology in education as distance learning platforms, educational applications and websites
5. Develop teaching skills and use effective teaching strategies.

12. Acceptance criteria

Central admission by the Ministry of Higher Education (preparatory school graduates in the scientific, biological and applied branches and industrial preparatory school graduates) .

13. The most important sources of information about the program

- Iraqi and international public universities with advanced rankings
- College library and electronic library
- Modern scientific research

14. Program Development Plan

- Twinning with Iraqi public universities
- Sobriety exam, joint exam, and ministerial assessment exams.

								Required learning outcomes of the program											
General and transferable skills other skills (or) related to employability and personal development				thinking skills				specific -Subject skills				knowledge and understanding				essen tial Or my choic e	Course name	/ Year Level	
D 4	D 3	D2	D1	Pa rt 4	Pa rt 3	Pa rt 2	Pa rt 1	B 4	B 3	B 2	B 1	A4	A3	A2	A1				
																	The first stage		
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Principles of Electrical Engineering (DC)	quarter ly	
√		√	√	√				√	√	√	√	√			√	essen tial	Computer Basics	quarter ly	
		√	√		√			√	√			√	√	√	√	essen tial	differential mathematics	quarter ly	
√		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Engineering drawing	quarter ly	
		√	√		√			√				√			√	essen tial	Democracy and human rights	quarter ly	
		√	√		√			√				√	√	√	√	essen tial	English languagel	quarter ly	
		√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	medicinal chemistry	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Principles of Electrical Engineering (AC)	quarter ly	

		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Medical Physics	quarter ly	
		√	√			√	√	√	√			√	√	√	√	essen tial	Mechanics	quarter ly	
		√	√		√				√			√	√	√	√	essen tial	Integrative mathematics	quarter ly	
		√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Engineering workshops	quarter ly	
	√	√	√		√		√	√		√	√	√	√	√	√	essen tial	Computer programming and its applications	quarter ly	
		√	√		√			√				√			√	essen tial	Arabic languagel	quarter ly	
																	The second stage		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Medical laboratory equipmentl	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Electronic circuits I	quarter ly	
		√	√	√		√	√	√	√	√	√	√	√	√	√	essen tial	electrical machines	quarter ly	
		√	√		√				√	√	√	√	√	√	√	essen tial	Engineering mathematics	quarter ly	
		√	√			√		√	√	√	√	√			√	essen tial	Anatomy and Physiology	quarter ly	
		√	√		√			√				√			√	essen tial	Baath regime crimes in Iraq	quarter ly	
	√	√	√		√			√		√	√	√			√	essen tial	computer applications	quarter ly	

√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Laboratory Medical EquipmentII	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Electronic CircuitsII	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	digital electronics	quarter ly	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Clinical chemistry devices	quarter ly	
√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	essen tial	Biomedical transducers and sensors	quarter ly	
		√	√		√			√				√			√	essen tial	EnglishII	quarter ly	
		√	√		√			√				√			√	essen tial	Arabic LanguageII	quarter ly	
																	The Third stage		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Medical Diagnostic Instrumentation I	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Microprocessor	quarter ly	
		√	√	√		√	√	√	√	√	√	√	√	√	√	essen tial	Electromagnetic Fields	quarter ly	
		√	√		√				√	√	√	√	√	√	√	essen tial	Signals and Systems	quarter ly	
		√	√			√		√	√	√	√	√			√	essen tial	Computer Programming and Applications II	quarter ly	
		√	√		√			√				√			√	essen tial	Project Management	quarter ly	
	√	√	√		√			√		√	√	√			√	essen tial	Medical Diagnostic Instrumentation II	quarter ly	

√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Medical Electronic Systems	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Medical Communication Systems	quarter ly	
		√	√			√	√	√	√	√	√	√	√	√	√	essen tial	Power Electronics	quarter ly	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	essen tial	Project I	quarter ly	
√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	essen tial	Advanced Computer Programming	quarter ly	

❖ Please tick the boxes corresponding to the individual learning outcomes of the programm

