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

2025

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: .....

Faculty/Institute: **Madenat al–Elem University College**

Scientific Department: **Department of Medical Physics**

Academic or Professional Program Name: **Bachelor of Physics/Physical Assistant**

Final Certificate Name: **Bachelor of Science in Medical Physics**

Academic System: **Semester (fourth stage), courses (third stage), and the Bologna Process (first and second stages)**

Description Preparation Date: **1/9/2025**

File Completion Date: **13/9/2025**

Signature:

Head of Department Name:

Assist. Prof. Dr. Walid Nassar Raja

Date:

Signature:

Scientific Associate Name:

Assist. Prof. Dr. Thamer Kazem Qasim

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

Prof. Dr. Fares Abdul Karim Khazal

1. Program Vision

The Department of Medical Physics strives to establish, qualify, and develop a specialized academic department in accordance with local and international standards. It aims to meet the labor market demands of both public and private institutions by utilizing and advancing scientific and educational methods, thereby achieving leadership among similar departments in local and international universities.

2. Program Mission

The Department of Medical Physics aims to provide an appropriate educational and academic environment to equip students with the knowledge and skills necessary to supply society with qualified professionals in medical physics, as well as in the fields of education and scientific research. Additionally, it seeks to develop their scientific and practical abilities. This mission is carried out through active collaboration between the department leadership, faculty members, students, and the labor market.

3. Program Objectives

The Department of Medical Physics aims to achieve the following objectives:

1. Attain excellence in education, learning, and scientific research in service of the community.
2. Enhance the quality of graduates by meeting comprehensive quality standards.
3. Develop advanced and innovative educational programs that prepare graduates to meet the demands of the knowledge-based society and labor market.
4. Equip students with fundamental knowledge and skills in the field of medical physics and its various applications.

5. Promote scientific research and train qualified academic and professional personnel to contribute to outstanding scientific and practical research.
6. Emphasize practical skills through hands-on training with medical devices, giving precedence to practical application over theoretical knowledge to build a strong reputation.

Prepare graduates to work as medical physics assistants in hospital and health center laboratories.

4. Program Accreditation

Twinning with the University of Anbar / College of Applied Sciences / Department of Medical Physics

5. Other external influences

Summer training, field visits to hospitals and health centers, training courses, and electronic libraries.

1. Program Structure

1. Program Structure	Number of Courses	Academic Unit	Percentage	Notes*
Institutional Requirements				
College Requirements	8	16	8.56%	
Department Requirements	46	171	91.4%	
Summer Training	2 months	–	0%	
Others				

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

6. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
First Year First Course			**Theoretical**	**practical**
	MPH1101	Mechanics 1	3	2
	MPH1102	Electricity and Magnetism	3	2
	MPH1103	Mathematics	4	
	MUC1104	Arabic	3	
	MUC1105	Human and democracy	3	
	MPH1106	Analytic Chemistry	3	2
			19	**6**

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
First Year Second Course			**Theoretical**	**practical**
	MPH1217	Mechanics 2	3	2
	MPH1208	Biophysics	3	2
	MPH1209	General Biology	3	2
	MUC12010	Computer Science	2	
	MUC12011	English 1	3	
	MPH12012	Organic Chemistry	3	2
			17	**6**

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
Second Year First Course			**Theoretical**	**practical**
	MPH21013	Heat and Thermodynamic	3	2
	MPH21014	Optics	3	2
	MUC21115	English (2)	2	
	MPH21016	Atomic Physics	2	2
	MPH21017	Physiology	2	2
	MPH21018	Electromagnetic Waves	3	
	MUC21019	The Crimes of Baath regime in Iraq	2	
			17	**8**

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
Second Year Second Course			**Theoretical**	**practical**
	MPH22020	Medical Imaging	3	2
	MPH22021	Molecular Biology	3	2
	MPH22022	Bioelectronics	2	2
	MPH22023	Healthy Culture	2	
	MPH22124	Computer Science II	1	2
	MPH22025	Analog Electronics	2	2
	MPH22026	Phonetics Science	2	
			15	**10**

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
Third Year First Course			**Theoretical**	**practical**
	MPH22027	Anatomy	2	2
	MPH22028	Laser Principles	2	2
	MPH22029	Analog Electronics	2	2
	MPH22030	Medical Physics 1	2	2
	MPH22131	Physics of Medical Devices	2	2
	MPH22032	Environmental Pollution	2	
	MPH22033	Ultrasound Physics	2	
			14	**10**

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
Third Year Second Course			**Theoretical**	**practical**
	MPH22034	Physiology	2	2
	MPH22035	Nuclear Physics	2	2
	MPH22036	Digital Electronics	2	2
	MPH22037	Lasers in Medicine	2	
	MPH22138	Medical Physics 2	2	2
	MPH22039	Biofluids	2	
	MPH22040	Health Management	2	
			14	**8**

1. Program Description				
Year/Level	**Course**	**Course Name**	**Credit Hours**	
Program Skills Outline for stage 1				
Fourth Year First Course			**Theoretical**	**practical**
	MPH22041	Medical Image Processing	2	2
	MPH22042	Medical Physics 3	2	2
	MPH22043	Radiation Protection	2	2
	MPH22044	Medical Device Physics 2	2	
	MPH22145	Biomaterials	2	
	MPH22046A	Graduation Project	2	
			12	**6**

1. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
Fourth Year First Course			**Theoretical**	**practical**
	MPH22047	Medical Image Analysis	2	2
	MPH22048	Medical Physics 4	2	
	MPH22049	Nuclear Medicine and Radiotherapy	2	
	MPH22050	Professional Ethics	2	
	MPH22151	Neurophysics	2	
	MPH22052	Medical Accelerators	2	
	MPH22046B	Graduation Project	2	
			14	**2**

Required learning outcomes of the program															
Ethics				Skills				knowledge				Essential or optional?	Course name	Course	Cours
C4	C3	C2	C1	P4	P3	P2	P1	A4	A3	A2	A1				
Program Skills Outline for stage 2															
x	x	x	x	x	x	x	x	x		x	x	C	Mechanics 1	MPH1101	
x	x	x	x	x	x	x	x	x	x	x	x	C	Electricity and magnetism	MPH1102	First
x		x	x	x	x	x	x	x	x	x	x	B	mathematics	MPH1103	
x	x	x	x	x	x	x	x	x	x	x	x	S	Arabic language	MUC1104	
x	x	x	x	x	x		x	x	x	x	x	S	Human rights and democracy	MUC1105	
x	x	x	x	x	x	x	x	x	x	x	x	B	Analytical Chemistry	MPH1106	
x	x	x	x	x	x	x	x	x	x	x	x	C	Mechanics 2	MPH1217	
x	x	x	x	x	x	x	x	x	x	x	x	C	Biophysics	MPH1208	Secon
x	x		x	x	x	x	x	x	x	x	x	B	Biology General	MPH1209	
x	x	x	x	x	x	x	x	x	x	x	x	S	Computer science	MUC12010	
x		x	x	x	x	x	x	x	x	x	x	S	English Language 1	MUC12011	
x	x	x	x	x	x	x	x	x	x	x	x	B	Organic Chemistry	MPH12012	

Program Skills Outline for stage 3

Required learning outcomes of the program															
Ethics				Skills				knowledge				Essential or optional?	Course name	Course	Cours
C4	C3	C2	C1	P4	P3	P2	P1	A4	A3	A2	A1				
x	x	x	x	x	x	x	x	x	x	x	x	C	Heat & Thermodynamics	MPH21013	
x	x	x	x	x	x	x	x	x	x	x	x	C	optics	MPH21014	First
x	x		x	x	x	x	x	x	x	x	x	S	English 2	MUC21115	
x	x	x	x	x	x	x	x	x	x	x	x	C	Atomic physics	MPH21016	
x	x	x	x	x	x	x	x	x	x	x	x	B	Physiology	MPH21017	
x	x	x	x	x	x	x	x	x	x	x	x	C	Electromagnetic waves	MPH21018	
x	x	x	x	x	x	x	x	x	x	x	x	S	Baath regime crimes	MUC21019	
x		x	x	x	x	x	x	x	x	x	x	C	Medical imaging	MPH22020	Second
x	x	x	x	x	x	x	x	x	x	x	x	B	Molecular biology	MPH22021	
x	x	x	x	x	x	x	x	x	x	x	x	C	Bioelectronics	MPH22022	
x	x		x	x		x	x	x	x	x	x	B	Health culture	MPH22023	
x	x	x	x	x	x	x	x	x	x	x	x	S	Computer Science 2	MPH22124	
x	x	x	x	x	x	x	x	x	x	x	x	B	Analog electronics	MPH22025	
x	x	x	x	x	x	x	x	x	x	x	x	C	Phonetics	MPH22026	

Ethics				Skills				knowledge				Essential or optional?	Course name	Course code	Cours
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1				
Program Skills Outline for stage 4															
Required learning outcomes of the program												C	Laser Principles	MPH22028	
Ethics				**Skills**				**knowledge**				Essential B	Analog electronics	MPH22029	**Cours**
x	x	x	x	x	x	x	x	x	x	x	x	C	Medical Physics 1	MPH22030	
x	x	x	x	x	x	x	x	x	x	x	x	C	Physics of medical devices	MPH22131	
x	x	x	x	x	x	x	x	x	x	x	x	B	Environmental pollution	MPH22032	
x	x	x	x		x	x	x	x	x	x	x	B	Ultrasound Physics	MPH22033	
x	x	x	x	x	x	x	x	x	x	x	x	C	Physiology	MPH22034	
x	x		x	x	x	x	x	x	x	x	x	C	Nuclear physics	MPH22035	Secon
x	x		x	x	x	x	x	x	x	x	x	B	Digital electronics	MPH22036	
x		x	x	x	x	x	x	x	x	x	x	C	Lasers in medicine	MPH22037	
x	x	x	x		x	x	x	x	x	x	x	C	Medical Physics 2	MPH22138	
x	x	x	x	x	x	x	x	x	x	x	x	B	Biofluids	MPH22039	
x	x	x	x	x	x	x	x	x	x	x	x	B	Health management	MPH22040	

C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1	optional?	Course name	Course code	
x	x	x	x	x	x	x	x	x	x	x	x	C	Medical image analysis	MPH22041	
x	x	x	x	x	x	x	x	x	x	x	x	C	Medical Physics 4	MPH22042	
x	x	x	x	x	x	x	x	x	x	x	x	B	Radiation protection	MPH22043	First
x	x	x	x	x	x	x	x	x	x	x	x	C	Physics of Medical Devices 2	MPH22044	
x	x	x	x	x	x	x	x	x	x	x	x	C	Biological materials	MPH22145	
x	x	x	x	x	x	x	x	x	x	x	x	C	Graduation project	MPH22046A	
x	x	x	x	x	x	x	x	x	x	x	x	C	Medical image analysis	MPH22047	
x	x	x	x	x	x	x	x	x	x	x	x	C	Medical Physics 4	MPH22048	Secon
x	x	x	x	x	x	x	x	x	x	x	x	B	Nuclear medicine and radiotherapy	MPH22049	
x	x	x	x	x	x	x	x	x	x	x	x	B	Professional ethics	MPH22050	
x	X	x	x	x	x	x	x	x	x	x	x	B	Neurophysics	MPH22151	
x	X	x	x	x	x	x	x	x	x	x	x	C	Medical accelerators	MPH22052	
x	X	x	x	x	x	x	x	x	x	x	x	C	Graduation project	MPH22046B	

1. Teaching and Learning Strategies

1. Teaching through electronic and exploratory lectures.
2. Conducting practical tests in laboratories.

Using methods of critical thinking, discussion, and information sharing.

2. Evaluation methods
1. Examination scores. 2. Evaluation of reports. 3. Graduation research projects. 4. Evaluation by health institutions. Practical training.

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

			(if applicable)			
	General	**Special**			**Staff**	**Lecturer**
Assistant Prof.	PHYSICS	NUCLEAR PHYAASICS				

No.	Name	Academic Qualification	Academic Rank	E-mail	Mobile No.
1	Waleed Nassar Raja	Ph.D (Nucl. Phy.)	Assistant Prof.	waleednassar@mauc.edu.iq	078106618 1
2	Wasof O. Khatab	Ph.D (Phy.)	Assistant Prof.	wasif.o.khatab@mauc.edu.iq	077127711 6
3	Selman Saeed	Ph.D (Phy,)	Assistant Prof.	selmansaeed@mauc.edu.iq	078083995 8
4	Farok a. Alasaf	Ph.D (Phy.)	Assistant Prof.	farouk.a.alasaf@mauc.edu.iq	077281603 7
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6	Jamal K. Alsaedir	Ph.D (Nucl. Phy.)	Assistant Lect.	jamal.kadhom@mauc.edu.iq	077151904 9
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9	Hussein S. Shehab	Msc (Math.)	Assistant Lect.	hussein.sami93@mauc.edu.iq	077354414 8
10	Faez H. Alberekdar	Ph.D (Leaser Phy)	Lecturer	faeza.hussein@mauc.edu.iq	079019709 7
11	Hiba R. Shakir	Ph.D (S.State Phy)	Lecturer	hiba.r.shakir@gmail.com	078134273 3
12	Amal A. Al-Musawi	Msc (Medical Phy)	Assistant Lect.	amulabd76@yahoo.com	079012993 6
13	Firas M. Radhi	Ph.D (Nucl. Invir)	Lecturer	firasradhi@yahoo.com	077053221 2
14	Ahmed H. Waheeb	Ph.D(Medical Phy)	Lecturer	ahmedph27@yahoo.com	079061140 6
15	Tay K. Yousif	Msc (English Lan)	Assistant Lect.	Tai.k.Joseph2002@gmail.com	075120040 8
16	Ammar Ab. Dawod	Ph.D (Chemistry)	Lecturer	yahoodammar@gmail.com	077143288 9
17	Ali Abulaleem	Msc(Material Phy)	Assistant Lect.	ezzaldeenbaghdady@yahoo.com	077027248 1
18	Aqeel M. Ali	Ph.D (Biology)	Assistant Prof.	Sh.aqeel10@yahoo.com	077371973 3

Professional Development

Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

4. **Acceptance Criterion**
(Setting regulations related to enrollment in the college or institute, whether central admission or others)

5. **The most important sources of information about the program**
State briefly the sources of information about the program.

6. Program Development Plan

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	

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

Course Description Form

1. Course Name:
2. Course Code:
3. Semester / Year:
4. Description Preparation Date:
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
7. Course administrator's name (mention all, if more than one name)
Name: Email:
8. Course Objectives

Course Objectives	• ..... • ..... • .....
9. Teaching and Learning Strategies	
Strategy	

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning method	Evaluation method

		Outcomes	name		

11. Course Evaluation

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

12. Learning and Teaching Resources

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