

University of Mosul

College of Science

Medical Physics Department



First Cycle – Bachelor's degree (B.Sc.) – Medical Physics



Table of Contents|

1. Mission & Vision Statement
2. Program Specification
3. Program (Objectives) Goals
4. Program Student learning outcomes
5. Academic Staff
6. Credits, Grading and GPA
7. Modules
8. Contact

1 . Mission & Vision Statement

Vision Statement

For the department to be a pioneer in the field of medical physics sciences and to be distinguished at the local, regional and global levels, with a focus on education, training, services, applied research and community service.

Mission Statement

Preparing qualified graduates with knowledge and creativity in the field of medical physics, who are able to interact with the requirements of the age and technology, and contribute to building Iraqi society on sound scientific and ethical foundations.

2 . Program Specification

Programme code:	BSc-MPH	ECTS	240
Duration:	4 levels, 8 Semesters	Method of Attendance:	Full Time

Preparing qualified graduates with knowledge and creativity in the field of medical physics, who are able to interact with the requirements of the age and technology, and contribute to building Iraqi society on sound scientific and ethical foundations.

3 . Program Objectives

1. Providing the graduate with the necessary scientific knowledge in medical physics, which aims to deepen understanding of the methodology of analysis, criticism and scientific research, and to use these skills to study and community service in the health and educational aspects.
2. Empowering the graduate with practical and research skills that qualify him to excel and succeed in his practical life, and to be able to enroll in distinguished postgraduate programs.

3. Enabling the student to train and gain practical experience on a wide range of modern technologies and by using advanced scientific equipment in the various disciplines of medical physics .
4. Increasing awareness of medical physics among the general public (society) and its role in health, advancing national development and production.
5. Developing the student's skills to use modern research sources to enable him to build the necessary scientific skills such as scientific writing skill, debate skill, constructive criticism, and scientific communication.
6. Developing the department to be a center of excellence for medical physics sciences research and postgraduate studies.
7. Preparing students to occupy jobs in the industrial sector, the government sector, and in the fields of medical physics work, whether professional, research, or academic.

4 . Student Learning Outcomes

Students with a Bachelor's degree in medical physics are expected to have acquired the following skills:

- 1 . Acquire basic concepts in medical physics sciences for Diagnosing and treating many diseases in the medical field using laboratory and analytical techniques.
- 2 . Use applied skills and laboratory and field techniques to analyze and interpret data, during the diagnosis and treatment of diseases, and take into account general safety requirements in the laboratory and field.
3. Understanding ethical and professional responsibilities and realizing the economic, environmental, societal and global implications of technical and scientific solutions to medical physics and environmental problems.
- 4 . Ability to communicate effectively and work as a team.

5. Academic Staff

Mobile number	University email	scientific title	certificate	Full name	No.
07702028210	marwanzt@uomosul.edu.iq	Assistant Professor	Ph.D	Marwan Zuhair Elias	1.
07722977221	drmahmoudahmed@uomosul.edu.iq	Lecturer	Ph.D	Mahmoud A Mohammed Fakhri	2.

07701643734	profdrsundusalkallak@uomosul.edu.iq	Professor	Ph.D	Sundus Natheer Al-Kallak	3.
07708850660	mahmoodalhasso@uomosul.edu.iq	Professor	Ph.D	Mahmood Zeki Al-Hasso	4.
07701680161	dr.zeyadalrassam@uomosul.edu.iq	Assistant Professor	Ph.D	Zeyad Thonnoon Al-Rassam	5.
07701638448	drranaaltaee@uomosul.edu.iq	Assistant Professor	Ph.D	Rana Tariq Yahya	6.
07703828306	qusaykhatib@uomosul.edu.iq	Assistant Professor	Ph.D	Qusay Kh. Al-Dulamey	7.
07701640616	dr.enaamhamza@uomosul.edu.iq	Assistant Professor	Ph.D	Enaam Ahmed Hamza	8.
07730703631	talal.salih@uomosul.edu.iq	Assistant Professor	Ph.D	Talal Sabhan Salih	9.
07739040024	rafidahmed@uomosul.edu.iq	Assistant Professor	Ph.D	Rafid Ahmed Abdullah	10.
07708244177	khalid.alshawi@uomosul.edu.iq	Lecturer	Ph.D	Khalid Qasim Kheder	11.
07502187923	aymen.abd@uomosul.edu.iq	Lecturer	Ph.D	Aymen A. Ahmed	12.
07719623199	aseelallayla@uomosul.edu.iq	Assistant Professor	Ph.D	Assel AbdulMunam Hussin	13.
07701681214	Sumaya.adnan@uomosul.edu.iq	Lecturer	Ph.D	Sumyia Adnan Salih	14.
07717992511	Huda.phy@uomosul.edu.iq	Lecturer	Ph.D	Huda Maswd mohammed	15.
07803242947	omrsbio82@uomosul.edu.iq	Assistant Professor	M.Sc.	Omar Muad Mohammed	16.
077016799183	Jasim.yaseen@uomosul.edu.iq	Lecturer	M.Sc.	Jassim Mohamed yaseen	17.
07701691480	shaimaa.talal.atalla@uomosul.edu.iq	Lecturer	M.Sc.	Shaimaa Talal Atalla	18.
07716869770	emanmuwafiq@uomosul.edu.iq	Lecturer	M.Sc.	Eman Muwafaq Ramadthan	19.
07701646482	samaheralneame@uomosul.edu.iq	Lecturer	M.Sc.	Samaher hazim sultan	20.
07722159294	dalobio121@uomosul.edu.iq	Lecturer	M.Sc.	Dalia Abidalalah Mohaamed	21.
07735470941	hiba.khaleel@uomosul.edu.iq	Lecturer	M.Sc.	Hiba khaleel Saeed	22.
07703034336	raghad.riyadh@uomosul.edu.iq	Lecturer	M.Sc.	Raghad Riyadh Shafiq	23.
07508390765	nadia.alhamdaney@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Nadia Adel Saeed	24.
07738498783	Mohmsbio118@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Mohammed Abdullah Ahmed	25.
07701763591	Noor.atarbashi@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Noor Mazin Abdallahrahman	26.
07706952893	Younis.h81@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Younis Hamad Ahmed	27.
07511332908	Sajaobody7@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Saja Hussain Ali	28.
07508733599	aleenmowafaq@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Aleen Mowafq Khaleel Jumaa	29.
07701090389	Sara92mh@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Sara Mohaamed Hamed	30.

07704528417	Aminaismail91@uomosul.edu.iq	Assistant Lecturer	M.Sc.	Amina Ismail Abdalhamed	31.
07704187555	zeyadalabdy@uomosul.edu.iq	Lecturer	Ph.D	Zeyad Gazu Alabdy	32.

6 Credits, Grading and GPA

Credits

Mosul University is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME			
Group	Grade	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	90 - 100	Outstanding Performance
	B - Very Good	80 - 89	Above average with some errors
	C - Good	70 - 79	Sound work with notable errors
	D - Satisfactory	60 - 69	Fair but with major shortcomings
	E - Sufficient	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	(45-49)	More work required but credit awarded
	F – Fail	(0-44)	Considerable amount of work required
Note:			
<p>Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p>			

Calculation of the Cumulative Grade Point Average (CGPA)

- The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

$$\text{CGPA} = [(1\text{st module score} \times \text{ECTS}) + (2\text{nd module score} \times \text{ECTS}) + \dots] / 240$$

7 Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-1101	Electricity and magnetism	95	105	8.00	C	
MPH-1102	Analytical chemistry	95	105	8.00	C	
SCI-101	Mathematics 1	34	16	2.00	B	
MPH-1103	General Biology 1	95	105	8.00	C	
UOM-101	Arabic Language	34	16	2.00	B	
UOM-104	Human Rights and Democracy	34	16	2.00	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-1204	Mechanics	79	71	6.00	C	
MPH-1215	Mathematics 2	79	71	6.00	S	SCI-101
MPH-1216	General Biology 2	79	71	6.00	C	MPH-1103
UOM-103	computer	48	27	3.00	B	
UOM-102	English Language	34	16	2.00	B	
MPH-1217	Organic Chemistry	94	81	7.00	C	MPH-1102

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-2308	Biophysics	79	71	6.00	C	
MPH-2319	Optics	79	71	6.00	C	MPH-1204
MPH-23010	Atomic physics	79	71	6.00	C	
MPH-23111	Physiology	79	46	5.00	S	MPH-1216
MPH-23112	Electromagnetic waves	63	62	5.00	C	MPH-1101
UOM-201	Crimes of Baath Party	34	16	2.00	B	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-24013	Medical imaging	79	71	6.00	C	
MPH-24114	Molecular biology	79	46	5.00	C	MPH-1216
MPH-24115	Bioelectronics	79	71	6.00	C	MPH-1102
MPH-24016	Healthy culture	48	27	3.00	C	
MPH-24017	Heat and Thermodynamic	79	46	5.00	C	
MPH-24118	Phonetics Science	48	77	5.00	S	MPH-1204

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-35019	Medical Physics 1	79	46	5.00	C	
MPH-35120	Anatomy	79	46	5.00	C	MPH-21111
MPH-35121	Biostatistics	79	21	4.00	S	MPH-1215
MPH-35122	Physics of Diagnostic radiology	94	56	6.00	C	MPH-22013
MPH-35123	Laser Basics	94	56	6.00	C	MPH-21118
MPH-35024	elective course1 (Medical Immunology + Medical Bacteriology + Medical Parasitology + Genes and Diseases	48	52	4.00	E	

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-36125	Medical Terminology	48	52	4.00	S	UOM-102
MPH-36126	Biochemistry	79	46	5.00	C	MPH-21111
MPH-36027	Physics of nuclear medicine	79	71	6.00	C	
MPH-36128	Medical laser applications	79	71	6.00	C	MPH-31123
MPH-36129	Analoge electronics	79	46	5.00	C	MPH-21112
MPH-36030	elective course2 (cellular and genetics disorders + Medical Plants and Toxicology+ Medical Labrotory Analysis + medical Virology	48	52	4.00	E	

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-47131	Medical image processing and analysis	79	71	6.00	C	MPH-22013
MPH-47032	Medical instrumentation physics	79	46	5.00	C	
MPH-47133	Radiotherapy Physics	79	71	6.00	C	MPH-32027
MPH-47134	Digital electronics	79	46	5.00	C	MPH-32129
MPH-47035	elective course3 (Medical Antimicrobial + Biotechnology + Medical Labrotory instruments)	48	52	4.00	E	
MPH-47036	Research Methodology	33	67	4.00	C	

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-48137	Medical Physics 2	79	71	6.00	C	MPH-31019
MPH-48138	Neurophysics	79	71	6.00	C	MPH-32126
MPH-48039	Material science and nanotechnology	49	76	5.00	C	
MPH-48040	Biomaterials	49	76	5.00	C	
MPH-48041	elective course4 (Physiology of Inficious diseases + Behavior and sensing from micro to human + Medical Bioinformatics	48	52	4.00	E	
MPH-48142	Research project	48	52	4.00	C	MPH-41036

8 Contact:

Official email of the Department of Medical Physics

MedicalPhysics.SC@uomosul.edu.iq

Program Manager: Lect.Dr. Mahmoud Ahmed Mohammed Fakhri

07722977221 drmahmoudahmed@uomosul.edu.iq

Program Coordinator: Lect.Dr. Huda Maswd mohammed

07717992511 Huda.phy@uomosul.edu.iq