

# 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	بيان المهمة والرؤية
2. Program Specification	مواصفات البرنامج
3. Program (Objectives) Goals	أهداف البرنامج
4. Program Student learning outcomes	مخرجات تعلم الطالب
5. Academic Staff	الهيئة التدريسية
6. Credits, Grading and GPA	الاعتمادات والدرجات والمعدل التراكمي
7. Modules	المواد الدراسية
8. Contact	اتصال

## 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 earth sciences and distinguish types of minerals, rocks, fossils and geological structures in the field using laboratory and analytical techniques.

- 2 . Using applied skills and laboratory and field techniques to analyze and interpret data, evaluate wealth, and find solutions to geological and environmental problems, taking into account the requirements of public safety 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 geological and environmental problems.**
- 4 . Ability to communicate effectively and work as a team.**

## 5. Academic Staff

ت	الاسم الثلاثي واللقب	الشهادة	اللقب العلمي	الايمل الجامعي	رقم الموبايل
1.	محمود احمد محمد فخري الدباغ	دكتوراه	مدرس	drmahmoudahmed@uomosul.edu.iq	07722977221
2.	رغد رياض شفيق كامل العباسي	ماجستير	مدرس	raghad.riyadh@uomosul.edu.iq	07703034336
3.	سندس نذير حميد الكلاك	دكتوراه	استاذ	profdrsundusalkallak@uomosul.edu.iq	07701643734
4.	محمود زكي سليمان الحسو	دكتوراه	استاذ	mahmoodalhasso@uomosul.edu.iq	07708850660
5.	زياد ذنون داود الرسام	دكتوراه	استاذ	dr.zeyadalrassam@uomosul.edu.iq	07701680161
6.	مروان زهير الياس	دكتوراه	استاذ مساعد	marwanzt@uomosul.edu.iq	07702028210
7.	رنا طارق يحيى قاسم القاسم اغا	دكتوراه	استاذ مساعد	dranaaltaee@uomosul.edu.iq	07701638448
8.	قصي خطاب عمر خطاب الدليمي	دكتوراه	استاذ مساعد	qusaykhatat@uomosul.edu.iq	07703828306
9.	انعام احمد حمزة حسين الداغستاني	دكتوراه	استاذ مساعد	dr.enaamhamza@uomosul.edu.iq	07701640616
10.	طلال سبهان صالح السلامي	دكتوراه	استاذ مساعد	talal.salih@uomosul.edu.iq	07730703631
11.	رافد احمد عبدالله العبدلي	دكتوراه	استاذ مساعد	rafidahmed@uomosul.edu.iq	07739040024
12.	خالد قاسم خضر العبيدي	دكتوراه	مدرس	khalid.alshawi@uomosul.edu.iq	07708244177
13.	أسيل عبدالمنعم حسين الليلة	دكتوراه	استاذ مساعد	aseelallayla@uomosul.edu.iq	07719623199
14.	ايمن عبدالجبار احمد	دكتوراه	مدرس	aymen.abd@uomosul.edu.iq	07502187923
15.	سمية عدنان صالح	دكتوراه	مدرس	Sumaya.adnan@uomosul.edu.iq	07701681214
16.	هدى مسعود محمد حسين	دكتوراه	مدرس	Huda.phy@uomosul.edu.iq	07717992511
17.	عمر مؤيد محمد توفيق العبيدي	ماجستير	استاذ مساعد	omrsbio82@uomosul.edu.iq	07803242947
18.	جاسم محمد ياسين	ماجستير	مدرس	Jasim.yaseen@uomosul.edu.iq	077016799183
19.	شيماء طلال عطا الله الدباغ	ماجستير	مدرس	shaimaa.talal.atalla@uomosul.edu.iq	07701691480
20.	ايمان موفق رمضان الملا حسين	ماجستير	مدرس	emanmuwafiq@uomosul.edu.iq	07716869770
21.	داليا عبد الإله محمد رحاوي	ماجستير	مدرس	dalobio121@uomosul.edu.iq	07722159294
22.	هبة خليل سعيد الشكري	ماجستير	مدرس	hiba.khaleel@uomosul.edu.iq	07735470941
23.	نادية عادل سعيد خليل الحمداني	ماجستير	مدرس مساعد	nadia.alhamdaney@uomosul.edu.iq	07508390765
24.	محمد عبدالله احمد	ماجستير	مدرس مساعد	Mohmsbio118@uomosul.edu.iq	07738498783
25.	نور مازن عبد الرحمن	ماجستير	مدرس مساعد	Noor.atarbashi@uomosul.edu.iq	07701763591
26.	يونس حمد احمد الجبوري	ماجستير	مدرس مساعد	Younis.h81@uomosul.edu.iq	07706952893
27.	سجي حسين علي عبد	ماجستير	مدرس مساعد	Sajaobady7@uomosul.edu.iq	07511332908
28.	الين موفق خليل جمعة	ماجستير	مدرس مساعد	aleenmowafaq@uomosul.edu.iq	07508733599
29.	سارة محمد حمد خنجر	ماجستير	مدرس مساعد	Sara92mh@uomosul.edu.iq	07701090389
30.	امنه إسماعيل عبد الحميد	ماجستير	مدرس مساعد	Aminaismmail91@uomosul.edu.iq	07704528417
31.	نادية خالد مصطفى	ماجستير	مدرس مساعد	nadia.mustafa@uomosul.edu.iq	07710455292
32.	مريم حازم عبد الجبار	ماجستير	مدرس مساعد	maryam.othman@uomosul.edu.iq	07708277701

## 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 مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
<b>Success Group (50 - 100)</b>	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
<b>Fail Group (0 - 49)</b>	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
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.				

### Calculation of the Cumulative Grade Point Average (CGPA)

1. 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:

$$CGPA = [ (1st\ module\ score \times ECTS) + (2nd\ module\ score \times ECTS) + ..... ] / 240$$

## 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-1011	Arabic Language	34	16	2.00	B	
UOM-1040	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	95	105	8.00	C	
MPH-1215	Mathematics 2	34	16	2.00	C	SCI-101
MPH-1216	General Biology 2	95	105	8.00	C	MPH-1103
UOM-1031	computer	48	27	3.00	B	
UOM-1021	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	46	5.00	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	60	40	4.00	C	MPH-1101
UOM-2050	Crimes of Baath Party	34	16	2.00	B	
UOM2022	English Language 2	34	16	2.00	B	UOM-1021

**Semester 4 | 30 ECTS | 1 ECTS = 25 hrs**



Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MPH-24013	Medical imaging	79	46	5.00	C	
MPH-24114	Molecular biology	64	36	4.00	C	MPH-1216
MPH-24115	Bioelectronics	79	46	5.00	C	MPH-1102
MPH-24016	Healthy culture	48	27	3.00	C	
MPH-24017	Heat and Thermodynamic	79	21	4.00	C	
MPH-24118	Phonetics Science	63	37	4.00	C	MPH-1204
UOM2032	Computer2	62	13	3.00	B	
UOM2012	Arabic Language 2	34	16	2.00	B	UOM-1011

**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	Biostatics	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	<b>elective course1</b> ( 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	<b>elective course2</b> (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	<b>elective course3</b> ( 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	<b>elective course4</b> (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:

الايميل الرسمي لقسم الفيزياء الطبية

[MedicalPhysics.SC@uomosul.edu.iq](mailto:MedicalPhysics.SC@uomosul.edu.iq)

**Program Manager:**

07722977221

[drmahmoudahmed@uomosul.edu.iq](mailto:drmahmoudahmed@uomosul.edu.iq)

م.د. محمود احمد محمد فخري

**Program Coordinator:**

07703034336

[raghad.riyadh@uomosul.edu.iq](mailto:raghad.riyadh@uomosul.edu.iq)

م.رغد رياض شفيق

رئيس القسم  
التوقيع :  
الاسم : م.د. محمود احمد محمد فخري

دقق الملف من قبل  
شعبة ضمان الجودة والأداء الجامعي  
اسم مدير شعبة ضمان الجودة والأداء الجامعي: د. محمود احمد محمد فخري