



## Academic program description form

### Department of Physics: Academic program description form:

## Academic program description form

Reviewing the performance of higher education institutions ((academic program review))

### Description of the academic program

This academic program description provides a summary of the most important program characteristics and learning outcomes. What is expected of the student to achieve, proving whether he has made the most of the available opportunities. It is accompanied by a description of each course within the program.

1-The learning institution	Mosul university
2-University department/centre	College of science/Physics
3- Name of the academic program	Bachelor's degree in physical sciences
4- Name of the final certificate	Bachelor's degree
5- Study system	Annually
6- Accredited accreditation program	None
7- Other external influences	None
8- Date the prepared description	2020
9- Objectives of the academic program	Graduating a student familiar with the basic concepts of physics Reg is a student who is able to apply physics to medical and industrial fields. Graduating an elite group of students who have the ability to continue graduate studies to support higher education in the future.

<b>10-Required learning outcomes and methods of learning, learning and completion</b>
<b>A- Knowledge and understanding</b>
1. Enabling the student to gain an understanding of physics
2. Preparing qualified teachers to teach in educational institutions
<b>B- Subject-specific skills</b>
1. Theoretical learning skills
2. Practical learning and data analysis skills
Teaching and learning methods
Theoretical and practical lectures, daily tests and discussions
Evaluation methods
Exams, daily tests, debates, laboratory exercises, and a graduation project.
<b>C- Thinking skills</b>
1. Discussions
2. Relaxation feeding
Teaching and learning methods
Lectures, scientific training, applications, homework and scientific discussions



Evaluation methods
Exams, daily tests, debates, laboratory exercises, and a graduation project.
<b>D- General and developed skills (other skills learned for employability and personal development).</b>
1. Ability to work in a multi-disciplinary team 2. Ability to communicate constructively
Teaching and learning methods
For lectures, scientific exercises, home tests and scientific discussions
Evaluation methods
Exams, daily tests, discussions, laboratory exercises, and a graduation project.

### 11 .Program structure

Hours		Name or course code	Course or course code	Level/year
Theory	Practical			
3	2	Mechanical principles (G2)	PHYS102	1 <sup>st</sup>
3	2	Principle of electrophoresis and magnetism (G2)	PHYS103	
2	2	Properties of matter and wave motion	PHYS104	
3	2	Geometric optics	PHYS105	
2	2	Computing (G2)	COMP127	
3		Linear algebra	MATH129	
3		Differentiation and integration 1	MATH101	
3		Differentiation and integration 2	MATH102	
2	1	Chemistry	CHEM131	
	1	Sport	UMSE101	
2		human rights(G2)	UMHR101	
2		Arabic	UMAR102	
1		English	UMEL01	
1		Professional ethics	UMPE103	
1		Experimental methods	UMEM104	
3		Mathematic I	PHYS201	
3		Analog electronic	PHYS202	
2		Thermodynamic	PHYS203	
2		Astronomy I	PHYS204	
2		Modern physics I	PHYS205	
2		Geometric optics I	PHYS206	
	9	Practical I	PHYS207	
1		Healthy culture	PHYS208	
3		Mathematic II	PHYS209	
3		Digital electronic	PHYS210	
2		Statistical mechanics	PHYS211	
2		Astronomy II	PHYS212	
2		Modern physics II	PHYS213	



2		Geometric optics II	PHYS214	
	9	Practical II	PHYS215	
1		Philosophy of science	PHYS216	
2	2	Mathematics and modeling I	PHYS301	3 <sup>rd</sup>
2		Laser	PHYS302	
2		Physical optics I	PHYS303	
3		Analytical mechanics I	PHYS304	
2		Science of crystals	PHYS305	
2		Plasma	PHYS306	
	6	Practical (I)	PHYS307	
2	2	Mathematics and modeling II	PHYS308	
2		Applications of laser	PHYS309	
2		Physical optics II	PHYS310	
3		Analytical mechanics II	PHYS311	
2		Science of materials	PHYS312	
2		Molecular of physics	PHYS313	
	6	Practical (II)	PHYS314	

## 12 . Planning for personal development

Extracurricular activities, scientific trips, and scientific tours

## 13 .The admission criterion ( setting the rules for students to join the college or institute)

Central admission

## 14 .The most important sources of information about the program

Student guide for central admission from the Ministry of Higher Education and Scientific Research