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

Academic Program Specification Form for The Academic

University: Anbar
College: Science
Department: **physics**
Date of Form Completion: 7 – 9 - 2022

Dean's Name	Dean's Asst. forScientific Affairs	Head of Department
Dr. Emad A. Salih	**Dr. Ahmed S. Obaid**	**Dr. Asmiet R. Abd- Alghafoor**
Date: 11/9/2022	Date: 11/9/2022	Date: 11/9/2022

Quality Assurance and University Performance Manager

Osama j. Mohammad

Date: 11/9/2022

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	University of Anbar
2. University Department/Centre	physics
3. Program Title	Bachelor
4. Title of Final Award	Bachelor - physics
5. Modes of Attendance offered	Semester
6. Accreditation	physics
7. Other external influences	
8. Date of production/revision of this specification	7 – 9 - 2022
9. Aims of the Program	
Providing relevant institutions and departments with technical and scientific cadres of recent graduates.	

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1.Choosing the best modern scientific methods in delivering information to students through a professional teaching staff.

A2.Providing students with scientific and practical physics experiences in all its branches through practical application in the department's laboratories and multiple field trips.

B. Subject-specific skills

The department aims to graduate scientific cadres working in the following:

B 1. Health and educational institutions

B2. Develop the student's research and analytical ability.

B 3. Develop the deductive side of the students.

B4. Learn how to work with scientific instruments

Teaching and Learning Methods

- Surprise daily tests (Quizzes) and weekly continuous exams.
- Practical exercises and activities in the classroom.
- Guiding students to scientific references to expand student's perceptions in understanding scientific courses.

Assessment methods

- Participation in the classroom.
- Presentation of activities.
- Semester and final exams.

C**. Thinking Skills**

C1. Develop the students ability to understand the specialization and deal with it flexibly

C2. Create a familiarity with branch applications.

C3. Responsibility in serving the community and the country through this scientific branch.

Teaching and Learning Methods

- Managing the lecture on an applied and scientific approach in a way that can be understood and analyzed.
- Giving students some group activities and assignments.
- Allocate a percentage of grades for the daily assignment and activities.

Assessment methods

- Active participation in the classroom is evidence of student commitment and responsibility.
- Commitment to deadlines for submitting assignments and research.
- The quarterly and final exams are an expression of commitments and cognitive and skill achievement.
- Applications, exercises and daily assignments.

	General and Transferable Skills (other skills relevant to employability andpersonal development) D1. Develop the student ability to deal with technical means. D2. Develop the student ability to deal with internet. D3. Develop the student ability to deal with multimedia. D4. Develop the student ability to dialogue and discussion.
	Teaching and Learning Methods
	- Presenting the courses in a clear and simplified manner with the use of correspondence and illustrative charts and presentation through the power point technique. - Classroom and laboratory exercises and activities - Weekly and quarterly assignments and reports. - Guidance to scientific references to expand understanding of course details. - Visits and field trips to work sites.
	Assessment Methods
	- Surprise daily tests or exams (Quizzes). - Participation in the classroom. - Presentation of activities. - Semester and final exams.

11. Program Structure				12. Awards and Credits
Level/Year	Course or Module Title	Creditrating		
		Theoretical	Practical	

1st	Practical Physics I	-	6	Bachelor Degree Requires (x) credits
1st	Mechanics I	3	-	
1st	Electricity	3		
1st	Mathematics I	2		
1st	Programing Language I	2	2	
1st	Geophysics	2		
1st	Human rights	2		
1st	English Language	2		
1st	Practical Physics II	-	6	
1st	Magnetism	3		
1st	Mechanics II	3		
1st	Mathematics II	2	2	
1st	Programing Language II	2		
1st	General chemistry	2	2	
1st	Freedom & democracy	2		
1st	Arabic Language	2		
2nd	Practical Physics I	-	6	
2nd	Analytical Mechanics I	2		
2nd	Electronics I	3		
2nd	Thermodynamics I	3		
2nd	Mathematics III	2		
2nd	Numerical Analysis I	2		

2nd	Programing language I	2	2
2nd	English Language	2	
2nd	Practical Physics II	-	6
2nd	Analytical Mechanics II	2	
2nd	Electronics II	3	
2nd	Thermodynamics II	3	
2nd	Quantum Mechanics I	2	
2nd	Mathematics IV	2	
2nd	Programing Language II)	2	
3rd	Practical Physics I		6
3rd	Quantum Mechanics II	2	
3rd	optics I	3	
3rd	Laser Physics I	2	
3rd	Mathematical Physics I	3	
3rd	Material science	2	
3rd	Semiconductors I	2	
3rd	English Language	2	
3rd	Practical Physics II		6
3rd	Quantum Mechanics III	2	
3rd	optics II	3	
3rd	Laser Physics II	2	
3rd	Mathematical Physics II	3	

3rd	Statistical Mechanics	2	
3rd	Semiconductors II	2	
3rd	Modeling& Simulation	2	
4th	Practical Physics I		6
4th	Solid State Physics I	3	
4th	Nuclear Physics I	3	
4th	Electromagnetic theory I	2	
4th	Nanoscience I	2	
4th	Solar cells	2	
4th	Nuclear spectrum	2	
4th	English Language	2	
4th	Practical Physics II		6
4th	Solid State Physics II	3	
4th	Nuclear Physics II	3	
4th	Electromagnetic theory II	2	
4th	Nanoscience II	2	
4th	Research Project	2	
4th	Medical physics	2	
4th	Elementary particles	2	

13. Personal Development Planning
Follow up, Support and guide outstanding students and build their mental and scientific capabilities in line with their abilities and orientations in different branches.
14. Admission criteria.
Students who graduate from the sixth middle school accept the biological or applied branch with a rate of at least 80 %, in addition to the possibility of private admission.
15. Key sources of information about the program
One of the most important sources of information for the study program is the reliance on curricula and courses recognized in faculties and scientific departments in European and American universities. In addition to communicating with institutions and state administrations that possess chemical cadres, to set study programs that contribute to the graduation of students with scientific and applied experiences, to work in relevant departments and institutions, as well as support graduate programs.

Curriculum Skills Map																		
please tick in the relevant boxes where individual Program Learning Outcomes are being assessed																		
			Program Learning Outcomes															
Year / Level	CourseTitle	Core (C) Title or Option(O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development			
			A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
1st	Practical Physics I	C	√				√				√				√	√		
	Mechanics I		√				√											
1st	Electricity	C	√				√											
	Mathematics I		√				√											
1st	Programing Language I	O	√				√											
	Geophysics		√				√											
1st	Human rights	O	√				√											
	English Language		√	√			√	√			√				√	√		
1st	Practical Physics II	C	√				√				√				√	√		
	Magnetism																	
1st	Mechanics II	C	√				√											
	Mathematics II																	
1st	Programing Language II	C	√				√											
1st	Magnetism	C	√				√											
	Mechanics II																	
1st	Mathematics II	C	√				√				√				√			
		O																

	Programing Language II																	
1st	General chemistry Freedom & democracy	O	√								√							
1st	Arabic Language Magnetism	C O																
			√				√											
2nd	Practical Physics I Analytical Mechanics I	C	√	√			√	√			√	√			√	√		
2nd	Electronics I Thermodynamics I	C	√				√								√			
2nd	Mathematics III Numerical Analysis I	C	√	√			√				√				√	√		
2nd	Programing language I	O	√				√				√				√			
2nd	Practical Physics II Analytical Mechanics II	C	√				√								√			
2nd	Electronics II Thermodynamics II	C	√	√			√				√				√			
2nd	Quantum Mechanics I Mathematics IV	C	√				√				√				√			
2nd	Programing Language II	O	√				√				√							
2nd	Analytical Mechanics II Electronics II	C	√				√				√				√			
2nd	Thermodynamics II Quantum Mechanics I	C	√	√			√	√			√	√			√	√		
2nd	Mathematics IV	C	√				√	√			√				√			

3rd	Practical Physics I Quantum Mechanics II	C	√	√			√	√			√	√			√	√		
3rd	optics I Laser Physics I	C	√	√			√	√			√	√			√	√		
3rd	Mathematical Physics I Material science	C O	√	√			√	√			√	√			√	√		
3rd	Semiconductors I	C	√				√				√				√			
3rd	English Language	O	√	√			√	√			√	√			√	√		
3rd	Practical Physics II Quantum Mechanics III	C	√				√	√			√				√	√		
3rd	optics II Laser Physics II	C	√				√											
3rd	Mathematical Physics II Statistical Mechanics	C	√	√			√	√			√	√			√	√		
3rd	Semiconductors II	C	√	√			√	√			√	√			√	√		
3rd	Modeling& Simulation	O	√	√			√	√			√	√			√	√		
4th	Practical Physics I Solid State Physics I	C	√				√				√				√			
4th	Nuclear Physics I Electromagnetic theory I	C O	√	√			√				√				√	√		
4th	Nanoscience I Solar cells	O	√	√			√				√				√			
4th	Nuclear spectrum	O	√	√			√	√			√	√			√	√		

4th	Practical Physics II Solid State Physics II	C	√	√			√	√			√	√			√	√		
4th	Nuclear Physics II Electromagnetic theory II	C O	√	√			√	√			√	√			√	√		
4th	Nanoscience II Research Project	C O	√	√			√	√			√	√			√	√		
4th	Medical physics	O	√				√				√				√			