



جامعة

الكوفة

### Academic Program Specification

Physics department	Programme Title
	Programme Code
University of Kufa	Teaching Institution
College of science	College
Physics department	Department
First year (session), others (year)	Attendance Type
First session	Academic Session
First year (23 unit), second year (36 unit), third year (38 unit), fourth year (26 unit)	Credits
B.Sc and M.Sc.	Final Award
Ministry of higher education and scientific research/Iraq	Programme Accredited
Dr. Hyder H. Hussain, Dr. Ali A. Abu jassem	Programme Coordinator
2015	Date of Programme

Graduate students after provide them with required knowledge of physics science and scientific research then push the graduates to contribute in development the society in many fields such as medical, industrial and agricultural. Also we try to develop skills of the graduates and staff by using new technology and software.	Program aims
There are many fields that our graduates can contribute in it such as research, teaching, industry, health, energy and oil.	Intended learning outcome
<ol style="list-style-type: none"> <li>1- Learning the principles of physics science</li> <li>2- Classifying the science to classic and modern</li> <li>3- Classifying the science to pure and applied</li> <li>4- Using the physical theories in applied area</li> <li>5- Evaluating instruments and its appleid</li> </ol>	Knowledge and Understanding
Lectures, groups, electronic and particular learning, workshops and scientific trips.	Teaching and Learning Methods
Skills depend on student ability, thinking skills and the critiques.	Intellectual Skills
<ol style="list-style-type: none"> <li>1-Logic analysis to solve any problem.</li> <li>2- good thinking to do good decisions</li> </ol>	Teaching and Learning Methods
	Assessment Strategy
<ol style="list-style-type: none"> <li>1- Ability to deal with radioactivity sources and how to do radioactivity scan</li> <li>2- How to use the medical diagnosis instruments</li> <li>3- How to connect the electronic circuits</li> </ol>	Practical Skills
Lectures, electronic learning, workshops, seminars and scientific trips.	Teaching and Learning Methods
Examinations, homework and tests	Assessment Strategy
<ol style="list-style-type: none"> <li>1- Woke as groups</li> <li>2- Analyze and applied</li> <li>3- Planning and organizing the time</li> </ol>	Transferable/Key Skills
Lectures, electronic learning, workshops, seminars and scientific trips.	Teaching and Learning Methods
Oral and writing examinations	Assessment Strategy

بيانات المقررات الدراسية

units	no. hours		CodeNo.	class	
2	2	mechanic 1	Scp1182	first year	
2	2	Electricity	Scp1162		
2	2	mathematics 1	Scp1132		
2	1	computer 1	Scp1152		
2	2	astronomy 1	Scp1122		
2	2	chemistry	Scp1142		
2	2	human rights	Scp1172		
2	2	Arabic language	Scp1112		
4	4	practical physics 1	Scp1192		
2	2	Magnetism	Scp1272		
2	2	mechanic 2	Scp1282		
2	2	mathematics 2	Scp1222		
2	1	computer 2	Scp1232		
2	2	Geophysics	Scp1262		
2	2	democracy	Scp1242		
2	2	astronomy 2	Scp1212		
2	2	English language	Scp1252		
4	4	practical physics 2	Scp1192		
2	2	Thermodynamics	Scp2182		Second year
2	2	Modern physics 1	Scp2142		
2	2	Differential equation	Scp2162		
2	2	Analog electronics 1	Scp2112		
2	2	Analytical mechanics 1	Scp2122		
2	2	material physics 1	Scp2132		
3	2	numerical analysis	Scp2153		
4	8	practical physics 1	Scp2174		
2	2	statistical physics	Scp2282		
2	2	Modern physics 2	Scp2242		
2	2	Partial Differential Equations	Scp2252		
2	2	Analog electronics 2	Scp2212		
2	2	material physics 2	Scp2232		
2	2	Analytical mechanics 2	Scp2222		
2	2	Sound & Waves	Scp2272		
4	8	practical physics 2	Scp2264		
2	2	optics 1	Scp3142	Third year	
3	2	Quantum mechanics 1	Scp3173		
2	2	Laser & applications	Scp3122		
2	2	Molecular Physics	Scp3132		
2	2	Digital Electronics 1	Scp3112		
2	2	Optional subject 1	Scp3152		
3	6	practical physics 1	Scp3163		
2	2	optics 2	Scp3242		
3	2	Quantum mechanics 2	Scp3273		
3	2	Mathematics & modulation	Scp3233		
2	2	Nodal analysis	Scp3212		
2	2	Digital Electronics 2	Scp3222		
2	2	Research project	Scp3252		

3	4	practical physics 2	Scp3263	Fourth year
2	2	Electromagnetic theory 1	Scp4112	
3	2	Solid state physics 1	Scp4183	
3	2	Nuclear physics 1	Scp4123	
2	2	Plasma 1	Scp4152	
1	1	Science philosophy	Scp4171	
2	2	Optional subject 3	Scp4132	
2	2	Optional subject 5	Scp4142	
2	6	practical physics 1	Scp4162	
2	2	Electromagnetic theory 2	Scp4212	
3	2	Solid state physics 2	Scp4283	
3	2	Nuclear physics 2	Scp4223	
2	2	Plasma 2	Scp4252	
2	2	Research project	Scp4272	
2	2	Optional subject 4	Scp4232	
2	2	Optional subject 6	Scp4242	
2	6	practical physics 2	Scp4262	

### Regulation of Assessment

Direct observation, homework and tests

### Criteria for Admission

#### Criteria of college

- 1- Depend on criteria of ministry of higher education and scientific research
- 2- Applicant has to pass the test and interview
- 3- Checkup has to be good

#### Criteria of scientific department

- 1- The applicant has a chance to choose more than department
- 2- The Bachelor certificate
- 3- The capacity of department

### Key Sources of Information about the Programmer

Web site of college and university

## Support for Student Learning

The department support the student learning by:-

1. All students have a senior tutor who will provide support including pastoral and welfare.
2. The year directors and head of department are available to give help and advice.
3. Students work in pairs on the projects, which are supervised by a member of academic staff.
4. Most courses provide printed lectures notes, problems sheets and practical exercises and also can be obtained from the departmental office and website.
5. Members of staff are happy to give help and advice.
6. The department runs teaching laboratories and each laboratory has a coordinator who reports to senior academics.
7. A member of quality assurance in university will visit the student during the course to ensure satisfactory program.
8. There is library provision and computer room within the department and at college level.
9. In the final year, students will have a local project supervisor, with whom they will meet regularly and he will be responsible for their activities

### University Support for Student Learning:

1. library services.
2. computer workstations.
3. Careers Advisory Service.
4. Chaplaincy.
5. disability coordinator.

## Methods for Evaluating and Improving the standard of Learning and Teaching

The quality of the program :

- 1- Students provide a feedback at the end of unit, which are used to review and improve the unit.
- 2- The department management board and academic staff with students, which meets regularly, and provides a forum where any aspect of the teaching can be discussed.
- 3- Student membership of the department and faculty management board.
- 4- The discussions of the students with personal tutors and the Directors of Studies for each year.

**Assuring and enhancing the quality of the program:**

- 1- The program is periodically reviewed by external examiners.
- 2- Annual evaluation of each unit by the coordinator.
- 3- Periodic program reviews by academic staff.
- 4- External check up by the Quality Assurance of college.
- 5- The department external advisory panel, which includes representatives from students and industry and advisers on this course.
- 6- All academic staff regularly undergo observation of their teaching by colleagues.

**Methods for Evaluating the standard of Learning and Teaching of lecturer**

- 1- Evaluation of academic staff member by the head of department according to form No. 1.
- 2- Evaluation of academic staff member by students according to form No. 2.
- 3- Self-evaluation of academic staff member in accordance with the form No. 3.
- 4- Evaluation of academic year units by students according to form No. 4
- 5- The evaluation process are supervised by a head of quality assurance at college.

Methods for Evaluating and review the Programmer Structure

- 1- Review the program by the scientific committees
- 2- review the opinions of students about the programmer at end of every year

3- review the opinions of academic staff at the end of every year assortment

1- Assortment with the quality assurance at university

2- Know the feedback of this programmer every four years

### **Selection of academic staff members**

Chose the academic staff depending on the criteria of the ministry of higher education and scientific research as well as:

1- Depend on experience and ability

2- Depend on criteria of quality assurance

3- Depend on his graduation

4- Have to pass the interview

5- Evaluation the academic staff through the first year

### **Academic program management requirements**

1- Display the aim, vision and mission of the department

2- Head of department has good experience in this area

3- Committees to support

4- Feedback has to get from students

5- There is enough academic and supporter staff

6- Development the ability and skills for support staff

7- There are enough feedback and literature review for department

8- There are enough notes for new students

9- Support students outside of lectures

10- There is independence to realize the department aim