Course Specifications

Programme(s) on which the course is given Physics: P., P.&las.
Major or Minor element of programmes : major – minor.
Department offering the programme Physics
: P., P.
Department offering the course Physics
Academic year / Level third
Date of specification approval September 2012

A- Basic Information

Title: Quantum mechanics (2) Code: P373

Credit Hours: 3h Lecture:3h
Tutorial: 00 Practicals:00 Total: 3h

B- Professional Information

1 – Overall Aims of Course

by the end of this course, the student should be able to apply quantum mechanics principles to more advanced problems in physics .

2 – Intended Learning Outcomes of Course (ILOs)

a Knowledge and Understanding:

` The student will be able to

a1- understand how to apply quantum mechanics principles
a2- have the knowledge of some approximated methods
a3- dealing with some time-dependant problems

b Intellectual Skills

The student will be able to

b1-solve the different problems related to the angular momenta
b2- chose the suitable approximation method to solve some physical problems

c Professional and Practical Skills

The student will be able to

c1-suggest and solving some problems in physics

d General and Transferable Skills

d1-The student will be able to use the internet and present some data orally

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Angular momentum	15	5	
Approximated methods	15	5	
Time dependant problems and scattering	15	5	

4– Teaching and Learning Methods

4.1- lectures

4.2 – seminars

5- Student assessment methods

5.1 Written Exam to assess understanding and intellectual competencies.

5.3 Oral exam to assess attendance, data collection and presentation.

Assessment schedule

Assessment 1 Mid term Week 8

Assessment 2 Semester activities Week 6, 9, 10, 11

Assessment 4 Final term written exam Week 14

Weighting of assessments

Mid-Term Examination (written)	**20 %**
Final-term Examination (written)	**60 %**
Semester Work (oral presentation)	**5 %**
Semester Work (written)	**15 %**
Total	**100 %**

6- List of References

6.1- Course Notes

6.2- Essential Books (Text Books)

A. R. M. Rae(1981)), Quantum mechanics, McGraw Hill book company (V.K.)limited .

6.3- Recommended Books

L.I. Schiff (1968), quantum mechanics McGraw Hill book company (V.K.)limited .

P. T. Mathews (1974), introduction to quantum mechanics McGraw Hill book company (V.K.)limited .

6.4- Periodicals, Web Sites, … etc

7- Facilities Required for Teaching and Learning.

Course Coordinator: .Dr. Mohammed Abdel Hakeem

Head of Department: Prof.Dr. Sanaa Maize

Date: / /