Course Specifications

Programme(s) on which the course is given	Physics : P.,
P.&las.	
Major or Minor element of programmes -minor	: major
Department offering the programme	Physics
Physics	
Department offering the course	Physics
Academic year / Level	3 rd
Date of specification approval	September 2012
A- Basic Information	_
Title: Quantum mechanics (1)	Code: P275

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

B- Professional Information

1 – Overall Aims of Course

by the end of this course, the student should be able to understand the theory of quantum mechanics. He can differntiat between classical and this modern theory. He can apply the principles of quantum mechanics on some well known problems in physics

3h

2 – Intended Learning Outcomes of Course (ILOs)

a Knowledge and Understanding:

The student should be able to

a1- understand the quantum mechanics theory

a2- have the knowledge of how to deal with the physical problems under the shadow of this modern theory

a3- differentiate between classical and this modern theory

b Intellectual Skills

The student should be able to

b1-drive the equations which explain the

motion of a particle quantum mechanicallyb2- solve different physical problemsb3- compare the results with those obtainedby usin classical mechanics

c Professional and Practical Skills

 c1-suggesting and solving some problems in
 physics by using quantum mechanics
 c2- using the principles of quantum
 mechanics as a tool in solving the problems

d General and Transferable Skills d1- Internet down loading information

3- Contents

Торіс	No. of	Lectur	Tutor
	hours	e	ial/Pr
			actica
			l
Introduction	3	1	
Solving some	15	5	
important problems			
in one dimensions			
Solving some	12	4	
important problems			
in three dimensions			
The basics postulates	15	5	
of Q. M.			

- 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.
- 5.2. Oral exam to assess attendance, data collection and presentation

Assessment Schedule							
Assessment 1 Mid term			We	Week 8			
Assessment 2 Semester ac	ctiv	itie	es			Wee	ek 10
Assessment 4 Final term	wri	tte	n e	exa	m	Wee	ek 14
Weighting of Assessments							
Mid-Term Examination	ı 20)	%)			
Final-term Examination	n	6	0		%		
Oral Examination.		5	%)			
Semester Work	5		%)			
Other types of assessme	ent		1()	%		
Total	1()0		%	,		
6- List of References							
6.1- Course Notes							
6.2- Essential Books (Te	xt I	Boo	oks	3)			
A. R. M. Rae(1981)), Qu	ian	tun	n n	nec	han	ics,	
McGraw Hill book com	pan	y (V.	K .)	limi	ted.	
	-	•••	•••		• • • • •		• • • •
6.3- Recommended Bool	ks						
L.I. Schiff (1968), quant	um	m	ecł	nar	nics]	McGr	aw
Hill book company (V.K	K.)li	mi	ted	Ι.			
P. T. Mathews (1974), in	ntro	du	cti	on	to q	uantu	m
mechanics McGraw Hill	l bo	ok	co	m	pany	7	
(V.K.)limited .				-			
6.4- Periodicals, Web Si	tes,	•••	et	c			
7- Facilities Required for	· Te	acl	hin	ng a	and	Learn	ing
Course Coordinator: Prof.I	Dr.S	San	aa	M	aiz		0
Head of Department: Prof.I	Dr.	Sa	na	a N	Iaiz	e	
Date: / /							