



**ATTACHMENT 2 (e)**

**Course Specifications**

**Kingdom of Saudi Arabia**

**The National Commission for Academic Accreditation & Assessment**

**Course Specifications**

**PHYSICS FOR MEDICAL PURPOSES**

**PPHS125**

## Course Specifications

<b>Institution:</b> : Majmaah University	<b>Date of Report:</b> 3/1437 H
<b>College/Department:</b> Preparatory Year deanship	

### A. Course Identification and General Information

<b>1. Course title and code:</b> PHYSICS FOR MEDICAL PURPOSES/PPHS125			
<b>2. Credit hours:</b> 2 hrs.			
<b>3. Program(s) in which the course is offered:</b> Medicine, Medical Science and Dentistry			
<b>4. Name of faculty member responsible for the course:</b> Mr. OMAR ALMEQBEL			
<b>5. Level/year at which this course is offered:</b> 2 <sup>nd</sup> level, second semester. (Preparatory Year)			
<b>6. Pre-requisites for this course:</b> none.			
<b>7. Co-requisites for this course:</b> none			
<b>8. Location if not on main campus:</b> Preparatory Year Buildings/Majmaah and Zulfi.			
<b>9. Mode of Instruction (mark all that apply)</b>			
a. Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="100%"/>
b. Blended (traditional and online)	<input type="checkbox"/>	What percentage?	<input type="text"/>
c. e-learning	<input type="checkbox"/>	What percentage?	<input type="text"/>
d. Correspondence	<input type="checkbox"/>	What percentage?	<input type="text"/>
f. Other	<input type="checkbox"/>	What percentage?	<input type="text"/>
Comments:			

### B Objectives

<b>1. What is the main purpose for this course?</b> The main purpose of this course is to provide the student with the fundamentals and basic physical concepts which are directly related to medical purposes.
<b>2. Briefly describe any plans for developing and improving the course that are being implemented.</b> <ul style="list-style-type: none"> <li>Plans that are being implemented for developing and improving the course:             <ul style="list-style-type: none"> <li>Continuous updating of the information, knowledge and skills included in the course through continuous search for new knowledge and skills available in recent publications (references, books, researches, magazines, internet....).</li> <li>Verifying the information resources.</li> <li>Continuous evaluation of the course content, student level, and develop plans accordingly</li> </ul> </li> </ul>



**C. Course Description** (*Note: General description in the form to be used for the Bulletin or handbook should be attached*)

This course covers the basic concepts of physics, gives an introduction to the students to deal with the physical equations so that the students can link the concept of physical and mathematical methods for its own account, in addition to increasing the cognitive side of the students about his/her physical phenomena and process applications.

<b>1. Topics to be Covered</b>		
<b>List of Topics</b>	<b>No. of Weeks</b>	<b>Contact Hours</b>
<b>Unit 1: unit and measurement</b>	2	6
<b>Unit 2: Vectors</b>	2	6
<b>Unit 3: Motion along a straight line</b>	2	6
<b>Unit 4: Motion in two dimensions and three dimensions.</b>	2	6
<b>Unit 5: Electricity</b>	2	6
<b>Unit 6: Light and Optics</b>	3	9
<b>Unit 7: Nuclear Physics</b>	2	6

<b>2. Course components (total contact hours and credits per semester):</b>						
	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30 hrs.	-	-	15 hrs.	-	45 hrs.
Credit	15 hrs.	-	-	15 hrs.	-	30 hrs.

<b>3. Additional private study/learning hours expected for students per week.</b>	4 hrs.
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**4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy**

	<b>NQF Learning Domains And Course Learning Outcomes</b>	<b>Course Teaching Strategies</b>	<b>Course Assessment Methods</b>
<b>1.0</b>	<b>Knowledge</b>		
1.1	To describe and explain physics concepts	Group discussion, lecture, team work learning, and handouts.	Continuous feedback, oral, Quizzes, and written exams
1.2	To explain physical phenomena	Group discussion, lecture, team work learning, and handouts.	Continuous feedback, oral, Quizzes, and written exams
1.3	To use the proper method for thinking and solving simple and complicated problems	Group discussion, lecture, team work learning, and handouts.	Continuous feedback, Quizzes, and written exams
<b>2.0</b>	<b>Cognitive Skills</b>		
2.1	Use the physics laboratory to apply what they learn	Group discussion, lecture, team work learning, and assignments.	quizzes , participation , written exams.
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.1	Develop certain team work activities.	Assignments and team work activities	Observing students, assignment.
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	Use internet for searching certain electronic journals regarding topics of the course.	Research activities, assignments.	Assignments, participation.
4.2	Prepare and present certain topics during the semester, look out for certain issues in the course.	Research activities, assignments.	Assignments, participation.
<b>5.0</b>	<b>Psychomotor</b>		
	Not applicable	Not applicable	Not applicable



5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Midterm exam 1	7 <sup>th</sup> week	20%
2	Midterm exam 2	12 <sup>th</sup> week	20%
5	Quizzes and homework	During the term	10%
6	Lab exam	16 <sup>th</sup> week	10%
7	Final Assessment exam	17 <sup>th</sup> week	40%

#### D. Student Academic Counseling and Support

**1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice.** (include amount of time teaching staff are expected to be available each week)

- 4 hours are schedule as office hour per week.

#### E. Learning Resources

##### 1. List Required Textbooks

David Halliday, Robert and Jearl Walker, *Principles of physics*, International student Version, 10<sup>th</sup> edition.

##### 2. List Essential References Materials (Journals, Reports, etc.)

[www.academicpub.org/jbap/](http://www.academicpub.org/jbap/)

##### 3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

Schaum's Outline of College Physics, 11th Edition (Schaum's Outline Series) F. J. Bueche and E. Hechet, McGraw-Hill.

Physics for Scientists and engineers, by Raymond A. Serway (Author), EDITION 9<sup>TH</sup>, ISBN-13: 978-1133947271

a.

##### 4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)

<http://science.pppst.com/physics.html>

<http://physwiki.ucdavis.edu>

<http://www.physics.org>

##### 5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

## F. Facilities Required

<b>1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)</b> <ul style="list-style-type: none"> <li>Classrooms with LCD projectors and 20 seats</li> </ul>
<b>2. Computing resources (AV, data show, Smart Board, software, etc.)</b> <ul style="list-style-type: none"> <li>The classroom must be equipped with smart or active board</li> </ul>
<b>3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) :</b> laboratory equipment physics (x-ray detector)

## G Course Evaluation and Improvement Processes

<b>1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching</b> <ul style="list-style-type: none"> <li>Course Evaluation Questionnaire at the end of the term</li> <li>Daily log for students comments and observations</li> </ul>
<b>2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor</b> <ul style="list-style-type: none"> <li>Peer Review evaluation of course' content, format, and teaching strategies</li> <li>External reviewers of the course annually</li> </ul>
<b>3. Processes for Improvement of Teaching</b> <ul style="list-style-type: none"> <li>Keeping up-to-date with new international trends and innovations in teaching strategies</li> <li>Conducting research to evaluate best methods of teaching</li> <li>Seeking external assessment of teaching strategies (supervised by head of department and College Dean)</li> <li>Attending relevant workshops and seminars</li> <li>Review of course components (contents teaching strategies and format) by internal and external reviewers at least annually</li> <li>Invitation of external guests speakers in the field for feedback</li> <li>Collaboration with sister universities in curriculum development</li> </ul>
<b>4 Processes for Verifying Standards of Student Achievement</b> <ul style="list-style-type: none"> <li>Marking and scoring checking by an independent faculty member of a sample of student work</li> <li>Periodic exchange and remarking of a sample of assignments with a faculty member in same institution</li> <li>Periodic exchange and remarking of a sample of assignments with a faculty member in another institution</li> <li>Discussing course objectives, teaching strategies, exams, students learning abilities and achievements, with another colleague in the same field</li> </ul>
<b>5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.</b> <ul style="list-style-type: none"> <li>Statistical process for student result</li> <li>Then annual review and assessment of the course both internally and externally</li> <li>All done with consideration to feedback from students and other faculty members</li> </ul>



**Faculty or Teaching Staff:** Omar Hani ALmeqbel

**Signature:**

**Date Report Completed:** 03/1437 H

**Received by:** Dr.Waleed Elbeshher

**Dean/Department Head:** Dean of Preparatory Year

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_