



# Course Specifications

Muharram 1437 H

Institution:	Majmaah University
Academic Department :	Basic Science Department
Programme :	PYP Programme
Course :	PHYSICS FOR MEDICAL PURPOSES
Course Coordinator :	OMAR ALMEQBEL
Programme Coordinator :	PYP Programme
Course Specification Approved Date :	28./ 1 / 1438H

## A. Course Identification and General Information

1 - Course title :	PHYSICS FOR MEDICAL PURPOSES	Course Code:	PPHS125...																				
2. Credit hours :	2																						
3 - Program(s) in which the course is offered:	Medicine, Medical Science and Dentistry																						
4 – Course Language :	. ENGLISH....																						
5 - Name of faculty member responsible for the course:	....OMAR ALMEQBEL..																						
6 - Level/year at which this course is offered :	2 <sup>nd</sup> level, second semester. (Preparatory Year)																						
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>• .....NONE.....</li> </ul>																						
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> <li>• .....NONE.....</li> </ul>																						
9 - Location if not on main campus :	: Preparatory Year Buildings/Majmaah and Zulfi.																						
10 - Mode of Instruction (mark all that apply)	<table border="1"> <tr> <td>A - Traditional classroom</td> <td><input checked="" type="checkbox"/></td> <td>What percentage?</td> <td>...66.6. %</td> </tr> <tr> <td>B - Blended (traditional and online)</td> <td><input type="checkbox"/></td> <td>What percentage?</td> <td>..... %</td> </tr> <tr> <td>D - e-learning</td> <td><input type="checkbox"/></td> <td>What percentage?</td> <td>..... %</td> </tr> <tr> <td>E - Correspondence</td> <td><input type="checkbox"/></td> <td>What percentage?</td> <td>..... %</td> </tr> <tr> <td>F - Other</td> <td><input checked="" type="checkbox"/></td> <td>What percentage?</td> <td>...33.3 %</td> </tr> </table>			A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	...66.6. %	B - Blended (traditional and online)	<input type="checkbox"/>	What percentage?	..... %	D - e-learning	<input type="checkbox"/>	What percentage?	..... %	E - Correspondence	<input type="checkbox"/>	What percentage?	..... %	F - Other	<input checked="" type="checkbox"/>	What percentage?	...33.3 %
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Comments :	.....other is lab.....																						

## B Objectives

<p><b>What is the main purpose for this course?</b></p> <p>The main purpose of this course is to provide the student with the fundamentals and basic physical concepts which are directly related to engineering..</p> <p><b>Briefly describe any plans for developing and improving the course that are being implemented :</b></p> <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>
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## C. Course Description

### 1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
Unit 1: Introduction to physics , Units and Measurements	...3....	..9....
Unit 2: Mechanics	...3....	..9...
Unit 3: Heat and Properties of Matter	...3....	..9.
Unit 4: Light and Optics	...3....	9.
Unit 5: Modern Physics	3..	..9...

### 2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	.. 30...	.....	.....	..15.	.....	..45.....
Credit	.....15...	.....	.....	.. 15.....	.....	..30.

### 3. Additional private study/learning hours expected for students per week.

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#### 4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
<b>1.1</b>	Recognize the importance of physics in daily life.	Group discussion, lecture, team work learning, and handouts.	Continuous feedback, oral, Quizzes, and written exams
<b>1.2</b>	Recognize the importance of the role of physics in Science and Technology.	Group discussion, lecture, team work learning, and handouts..	Continuous feedback, oral, Quizzes, and written exams
<b>١,٣</b>	Develop skills for understanding and interpreting of physical phenomena.	Group discussion, lecture, team work learning, and handouts.	Continuous feedback, oral, Quizzes, and written exams
<b>١,٤</b>	Develop working skills for solving different physics problems.	Group discussion, lecture, team work learning, and handouts.	Continuous feedback, oral, Quizzes, and written exams
<b>2.0</b>	<b>Cognitive Skills</b>		
<b>2.1</b>	. 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>		
<b>3.1</b>	Develop certain team work activities.	Assignments and team work activities	Observing students, assignment.
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
<b>4.1</b>	Use internet for searching certain electronic journals regarding topics of the course.	Research activities, assignments.	Assignments, participation.
<b>4.2</b>	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>		
<b>5.1</b>	Not applicable.	Not applicable	Not applicable



## 5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	Midterm exam 1	.....7.....	20%
2	Midterm exam 2	.....12.....	20%
3	Quizzes and homework	During the term	10%
4	Lab exam	16 <sup>th</sup> week	10%
5	Final Assessment exam	17 <sup>th</sup> week	40%





## D. Student Academic Counseling and Support

- 4 hours are schedule as office hour per week.

## E. Learning Resources

### 1. List Required Textbooks :

DALE EWEN, NEILL SCHURTER, P. ERIK GUNDERSEN, Paul G. Hewitt **INTRODUCTION TO PHYSICS**, Copyright 2016, ISBN: 978-1-78449-328-8

### 2. List Essential References Materials :

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

### 3. List Recommended Textbooks and Reference Material :

APPLIED PHYSICS , TENTH EDITION . DALE EWEN, NEILL SCHURTER, P. ERIK GUNDERSEN , ISBN : 978-0-13-611633-2

- Conceptual Physics , Eleventh Edition , Paul G. Hewitt , **ISBN 978-0-321-68492-9**

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### 4. List Electronic Materials :

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

<http://physwiki.ucdavis.edu>

<http://www.physics.org>

### 5. Other learning material :

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## F. Facilities Required

### 1. Accommodation

- Classrooms with LCD projectors and 20 seats

### 2. Computing resources

- The classroom must be equipped with smart or active board

### 3. Other resources

- laboratory equipment physics (x-ray detector)





## G Course Evaluation and Improvement Processes

### 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- Course Evaluation Questionnaire at the end of the term
- Daily log for students comments and observations

### 2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :

- Peer Review evaluation of course' content, format, and teaching strategies
- External reviewers of the course annually
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### 3 Processes for Improvement of Teaching :

- Keeping up-to-date with new international trends and innovations in teaching strategies
- Conducting research to evaluate best methods of teaching
- Seeking external assessment of teaching strategies (supervised by head of department and College Dean)
- Attending relevant workshops and seminars
- Review of course components (contents teaching strategies and format) by internal and external reviewers at least annually
- Invitation of external guests speakers in the field for feedback
- Collaboration with sister universities in curriculum development
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### 4. Processes for Verifying Standards of Student Achievement

- Marking and scoring checking by an independent faculty member of a sample of student work
- Periodic exchange and remarking of a sample of assignments with a faculty member in same institution
- Periodic exchange and remarking of a sample of assignments with a faculty member in another institution
- Discussing course objectives, teaching strategies, exams, students learning abilities and achievements, with another colleague in the same field

### 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- Statistical process for student result
- Then annual review and assessment of the course both internally and externally
- All done with consideration to feedback from students and other faculty members
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## Course Specification Approved

Department Official Meeting No ( ..... ) Date **28 / 1 / 1438 H**

### Course's Coordinator

**Name :** OMAR ALMEQBEL

**Signature :** .....

**Date :** 28./ 1 / 1438... H

### Department Head

**Name :** MAHER  
OBEIDAT

**Signature :** .....

**Date :** 28./ 1 / 1438 H



