

COURSE DESCRIPTION

PHYSICS

For

PREPARATORY YEAR STUDENTS

Institution	Majmaah University
College/Department	Preparatory Year

A Course Identification and General Information

1. Course title and code:	PHYSICS (PPHS 128)
2. Credit hours	3 (2, 2, 0)
3. Name of faculty member responsible for the course	Omar Hani Almeqbel.....
4. Level/year at which this course is offered	Preparatory Year Second Semester
5. Pre-requisites for this course (if any)	None
6. Co-requisites for this course (if any)	None

B Objectives

<p>Summary of the main learning outcomes for students enrolled in the course.</p> <p>The goal of this course is to provide the student with fundamentals and basic physical concepts which are directly related to engineering. the main learning outcomes for students include :</p> <ul style="list-style-type: none"> • Recognize the importance of physics in daily life. • Recognize the importance of the role of physics in Science and Technology. • Develop skills for understanding and interpreting of physical phenomena. • Develop working skills for solving different physics problems. • Training on the correct method for thinking and solving simple and complicated problems.
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C. Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

Topics to be Covered			
List of Topics	Chapter No.	No of Weeks	Contact hours
Introduction to Physics, Units and Measurements : Physics and its relation to other field, Models, Theories, and Laws, Measurement and Uncertainty, Significant Figures, Units, Standards, and the SI system, Conversion Units, Order of Magnitude, Dimensions and Dimensional Analysis	1	3	12
Mechanics : Vectors, linear Motion, Velocity, Acceleration, Uniformly Accelerated Motion and Free Fall, Force and the Law of Inertia, Force and the Law of acceleration, Gravity and Weight, Friction, Total Force in one Dimension, Law of Action and Reaction, Work, Power, Energy, Conservation of Mechanical Energy	2	3	12
First Exam :			
Heat and Properties of Matter: Temperature, Heat, Specific Heat, Change of Phase, Properties of Matter, Properties of Liquids, Properties of Gases, Density.	3	3	12
Vibrations and Waves: Good Vibrations , Wave Description , Wave Motion , wave speed, wave interference, Doppler effect	4	3	12
Second Exam :			
Electricity : Electric Charges, Coulomb's Law, Electric Potential, Ohm's Law, Electric Power, Electric Circuits	5	3	12
Final Exam :			

Course components (total contact hours per semester):				
Lecture : 30	Tutorial : 0	Laboratory : 30	Practical/Field work/Internship	Other :

D. Text books:

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

E. Assessment

Schedule of Assessment Tasks for Students During the Semester			
Assessment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	First Midterm exam	7	20
2	Second Midterm exam	12	20
3	Quizzes	During the term	5
4	Exercises	During the term	5
5	Lab	During the term	10
6	Final written exam	16	40