Sub.	Course Syllabus		كلية المعرفة ALMAAREFA COLLEGE
Year	First Term 1436/1437 - 2015/2016		

College	Al-Maarefa College
Department	Preparatory Department

Course Code	101 Phys.
Course Name	Introduction to Physics
Credit Hours	3 (2 + 1 + 0)
Instructor	Lutfur Rahman
Office & Office Hours	
Email	lrahman@mcst.edu.sa

Course Description	Basic Principles of Mechanics and vectors,Properties of fluids,Electricity and magnetism,Optics,Atomic and Nuclear Physics are the main topics to be covered.	
Prerequisite(s)	None	
Textbook(s) & Supplementary Materials	**Required text :**Physics by Kane & Sternheim (3rd edition).John Willey & sons**.** **Optional :**Physics by Douglas C.Giancoli.%th edition.Prentice Hall.	
Student Outcomes (SO) Addressed by the Course	At the end of the course,the students should be able to define ,analyse and describe the concepts of the all the topics taught.	
Major Topics Covered	Pl.Refer to course description.	
Assessment & Evaluation Plan for the Course	***Homework Assignments***	5
	Quizzes	2
	Lab / Tutorial	20
	Project/Presentations	3
	Two Midterm Exams	40
	Final	30
Policies		

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CALENDAR & OUTLINE OF TOPICS

WEEK	DATE (Starting)	TOPICS	DUTIES/TASKS DUE DATES
1	23/8/2015	(ch.1)Motion in a straight line – Introduction to SI.Units and measurements.sections:2,3.Problem solving techniques and solutions of relevant problems.	Home work(Questions.) 16,17,26,28,33.
2	30/8/2015	Motion in a straight line-- Sections:4,5. Solutions of relevant problems.	Questions.38,43,71,72,77,80.
3	06/9/2015	(ch.2)Vectors (components)— Section:1 Detailed explanation of vectors and solution of examples.	Questions.1,2,4,5,7,9,13.
4 5	13/9/2015 18/09/2015 to 03/10/2015	Vectors—Solution of problems. + (ch.3)Newton's laws of motion— sections:3,4 --- Eid-al-Adha vacation	**Quiz:1**
6	04/10/2015	(ch.3)Newton's laws of motion— Sections:5,6,8.Each law to be explained and treated separately and with examples.	Questions.47,50,51,55,87,90,91,100,102,103.
7	11/10/2015	Newton's laws of motion. Sections:12:More emphesis to be put on 2nd law.Quite a no.of problems to be solved.	

8	**18/10/2015**	(ch.6)Work,energy and power— Sections:1,2.Explanation and solution of problems.	1st.Mid term exam.
9	**25/10/2015**	(ch.6)Work,energy and power— Sections:3.Explanation and solution of problems.	Home work Questions.1,2,8,10,19,63,70,72,74
10	**01/11/2015**	(ch.)13Nonviscous Fluids— Sections:2,3.Explanation and solution of problems.	**Quiz:2**
11	**08/11/2015**	(ch.)13Nonviscous Fluids— Section:4,7.	Questions. ch.13: 7,9,10,11,32.
12	**15/11/2015**	(ch.17) Direct currents -- Sections:1,2.Solution of problems.	2nd Mid term exam.
13	**22/11/2015**	(ch.17) Direct currents-- Sestions:5,12.	Questions.1,10,11,13,18,23,24,25,45,46,71.
14	**29/11/2015**	(ch.24)Lenses -- Sections:1,2,3. Solution of problems.	Home Work.ch.24. Questions:5,7,11,13,19.
15	**6/12/2015**	(ch.24)Lenses- Section:4. +(ch.26)Particle properties of light.Sections:1,3.	. ch.26. Questions:1,3,4,6,16,17,19.
16	**13/12/2015**	(ch.30) Nuclear Physics- Sections:1,2,9. + (Ch.31)Ionizing Radiation- Sections:1,2.	Questions:1,2,4,8,11,26,27,36,43. Questions:14,16,17,23,29,47.
17	**20/12/2015**	FINAL EXAM	Course instructor: LutfurRahman

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Course Code & No	**101PHYS.**	**فيز101**	**رقم المقرر ورمزه**
Course Name	*General Physics101*	**الفيزياء العامة 101**	**اسم المقرر**
Credit Hours	**1 (0 + 1 +0)**	**1 (0 +1+ 0)**	**عدد الساعات المعتمدة**

Practical

Experiment 1: Measurements	تجربة 1: القياسات
Experiment 2: Force table	تجربة2 : طاولة القوى
Experiment 3: Simple pendulum	تجربة3: البندول البسيط
Experiment 4: Hooke's law	تجربة 4 : قانون هوك
Experiment 5: Free fall	تجربة5: السقوط الحر
Experiment 6: Work and energy-relationship	تجربة6: علاقة الشغل والطلقة
Experiment 7: Coefficient of Viscosity	تجربة7: معامل اللزوجة
Experiment 8: Boyle's law	تجربة8: قانون بويل
Experiment 9: Ohm's law	تجربة9: قانون اوم
Experiment 10: Lenses	تجربة10: العدسات

Experiment 2: Force table

Experiment 3: Simple pendulum

Experiment 4: Hooke's law

References

1. Practical Physics, G. L. Squires, Cambridge University Press, Cambridge, 1985.
2. Laboratory Experiments in College Physics, C. H. Bernard and C. D. Epp, John Wiley and Sons, Inc., New York, 1995.
3. Fundamentals of Physics, D. Halliday, R. Resnick and J. Walker, John Wiley and Sons, Inc., New York, 2001.

مواقع الانترنت:Web Sites

1- ملتقى الفيزيائيين العرب www.phys4arab.net/vb/
2- منتدى التجارب الفيزيائية www.phys4arab.net/vb/forumdisplay.php...
3- الموقع التعليمي للفيزياء www.hazemsakeek.com
4- المجلة البريطانية للفيزياء www.physicsworld.com