

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF PHYSICS

Physics 011 – Applied Physics I

Fall 2006 (Term 061)

Course Schedule and Grading Policy

Instructor: *Dr. Mohamed S. Kariapper*
Location: *Bldg. 6-142*
Phone: *860-3468*
E-Mail: mohamedk@kfupm.edu.sa
Web page: <http://faculty.kfupm.edu.sa/phys/mohamedk>
Class Times: Lectures: *UTW 07:20 – 08:10 p.m*
Recitation:
Office Hours: *U 05:30-06:30 p.m*
T: 05:30-06:30 p.m

1) Course Description:

A basic survey covering the fundamental principles of Physics, experimental methodology, and problem solving techniques using examples from the areas of mechanics, heat, electricity and magnetism.

2) Textbook:

“Physics Principles with Applications”, D.C. Giancoli, Fifth Edition, Prentice Hall, Inc (1998)

3) Method:

The course material will be presented in lectures (4 hrs/week) and lab work (3 hrs/week). Attendance in both lectures and lab is compulsory.

4) Grading Policy:

A) Course Grade: The course grade will be evaluated as follows:

Quizzes and Attendance	15%
Laboratory	20%
First Major Exam	15%
Second Major Exam	20%
Final Exam	30%
Total	100%

B) Laboratory Work

The course for lab work will be based on any or a combination of the lab reports, lab quizzes, lab exams, etc. as chosen by the lab instructor. Lab sessions will start on the second week of the classes.

C) Major and Final Examinations

The major exam and the final exam will be of multiple choice + problem solving types. The exams are scheduled as follows:

First Major Exam	Wednesday 12 July 2006
Second Major Exam	Wednesday 26 July 2006
Final Exam	Wednesday 16 August 2006

5) Policy on Make-Up Exams:

- a) If you miss a major or final exam, you should see the course instructor with your official excuse within three days after the exam
- b) Only official excuses are accepted. Personal excuses are not allowed.
- c) If you miss the exam without a valid excuse, you get a ZERO score for that exam
- d) The make-up (for a valid official excuse) will be given once, and no make-up for the final exam

6) Attendance:

Attendance will be enforced and evaluated according to current university regulations. A DN grade will be given to any student exceeding 10 absences without official excuse and/or three absences in laboratory experiments. Any student in possession of an excuse for officially authorized absence must present this excuse to his instructor no later than one week following his resumption of class attendance. Only those students who have less than 6 absences in the whole semester shall be promoted to upper grade if they reach the borderline between two grades (for example F to D or B to B+, etc.)

Physics 011 Lecture Schedule
Fall 2006 (Term 061)

Week	Date	Topics	Ch.	Sections	Homework
1	17 Sep. 19 Sep 20 Sep	Introduction, Measurements, Units, order of magnitude Reference frame, displacement, Velocity, Acceleration	01 01 02	1-4 5-7 1-4	3,4,12,17 2,11,14,20
2	24 Sep. 26 27	Motion in a constant Acceleration, free fall Scalars, Addition and Subtraction of Vectors Projectile motion	02 03 03	5-7 1-4 5,6	23,34,44 2,4,14,20,35
3	1 Oct. 3 4	Force, Newton First, Second and third law of motion Weight, Normal force and friction Problem solving.	04 04 04	1-5 6-8 9	1,7,27,39,45,52
4	8 Oct. 10 11	Uniform circular motion and Centripetal Acceleration Universal gravitation, Apparent Weightlessness Work and Kinetic Energy	05 05 06	1,2 6,7 1,3	4,7,8,12,25,26 4,7,20,32,36,40,58
Eid Al-Fitr Vacation (12 Oct. - 27 Oct.)					
5	29 Oct 31 01 Nov	Potential energy, Conservative and non-conservative forces Mechanical energy and its conservations, Power First Major Exam (chs 1-6)	06 06 --	4,5 6,7,10 ---	
6	05 Nov. 07 08	Momentum and its Conservation Collisions and Conservation of Energy Fluid Properties, Pascal's Principle	07 07 10	1,2 3,4 1-4	2,8,11,23,26 2,5,12,16,22,29
7	12 Nov. 14 15	Measurements of Pressure, Buoyancy and Archimedes' Principle <i>Review</i>	10 10 --	5 6	
8	19 Nov 21 22	Wave Motion, Types of Waves Energy Transported by Waves, Interference of Waves Standing Waves, Resonance	11 11 11	7,8 9,11 12	38,39,45,51,55,60
9	26 Nov 28 29	Characteristic and Intensity of Sound Sources of Sound Interference of Sound Waves, Doppler Effect	12 12 12	1,2 5 7,8	1,5,9,15,26,28,35, 52
10	03 Dec. 05 06	Temperature and Thermometers, Thermal Expansion Thermal Stress, The Absolute temperature, Ideal Gas Law Heat, Specific Heat, Latent Heat	13 13 14	2,4 6-8 2-6	4,9,18,25,28,35 9,14,22,28
11	10 Dec 12 13	Electric Charge and Force, Electrostatic Second Major Exam (chs 7,10,11,12,13,14) Induced Charge, Coulomb's Low, Problem Solving	16 -- 16	1-3 --- 4-6	4,11,12,21,30,37
12	17 Dec 19 20	Electric Field, Field lines Electric Potential, Relation between Electric Potential and Field Capacitance, Dielectrics, Energy Stored in capacitor	16 17 17	7,8 1-3 7-9	2,10,19,35,37,40
Eid Al-Adha Vacation (21 Dec. - 05 Jan.)					
13	07 Jan 09 10	Battery, Electric Current, Ohm's Low Receptivity, Electric Power Resistors in Series and Parallel, kirchhoff's Rules	18 18 19	1-3 4,6 1,3	4,8,13,19,26,31 4,7,13,20,24,34,42
14	14 Jan 16 17	EMF and Capacitors in Series and Parallel Sources of Magnetic Field Magnetic Force	19 20 20	5,6 1,2 3,4	3,7,10,13,22,28
15	21 Jan 23 24	Magnetic Field Due to Straight Wire, Force Between two Wires Review Final Exam (ALL materials)	20 -- --	5,6 -- --	1,3,7,8,11,14

Wish you a successful semester.

Mohamed S. Kariapper (Physics 011)