MARMARA UNIVERSITY FACULTY OF ENGINEERING

PHYS 102
PHYSICS 102 Spring Semester 2004-2005 COURSE DESCRIPTION

Institute/Department: Faculty of Engineering, Computer Eng. & Mech. Eng. & Environmental Eng.
Course Code   : Phys 102
Course Title   : Physics 102
Status of the Course : Compulsory
Number of Credits   : (4+0)
Course Type   : Lecture
Course Language   : English
Lecturer   : Assist.Prof. Dr. Fatih DUMLUDAĞ (Office: Faculty of Science and Arts,
                         Dept. of Physics, C107)
Office Hours   : Monday 11:00-12:00, Wednesday 15:00-16:00, Outside office hours, by
                         appointment via e-mail
Class Hours and Locations:
Comp. & Mech. Eng.; Monday 09:00-10:50, Room 244; Wednesday 11:00-12:50, Room 242
Environmental Eng.; Monday 15:00-16:50, Room 345; Wednesday 09:00-10:50, Room 345
WEB Site   : http://www.geocities.com/fatihdumludag
Tel   : 0.216.348 5938 (Office: 1312, Microsensor Laboratory: 1251)

Objectives of the Course   : The main objectives of this introductory physics course
are twofold: to provide the student with a clear and logical presentation of the basic concepts
and principles of physics, and to strengthen an understanding of the concepts and principles
through a broad range of interesting applications to the real world. In order to meet these
objectives, emphasis is placed on sound physical arguments. At the same time, I have attempted
to motivate the student through practical examples that demonstrate the role of physics in
other diciplines.

Contents   : Electric Fields, Gauss' Law, Electric Potential,
Capacitance and Dielectrics, Current and Resistance, Direct Current Circuits, Magnetic Fields,
Sources of the Magnetic Field, Faraday's Law, Inductance, Alternating Current Circuits,
Electromagnetic Waves.

Teaching Method   : Lectures supported by applications.

Assessment Details   :
Assessment&Examination Method
i) 1 Midterm (60 Pts), Short Quizzes (2) (2x20 pts)(some will be unannounced)
ii) Final

Result= [0,6*(Quiz+Mid-term)]+[0,4*Final Exam]

Text Book   :
1. Fundementals of Physics, D. Halliday/R. Resnick/J. Walker, John Wiley &Sons, Inc., Sixth
    edition, 2001
2. Physics for scientist and engineers with modern physics, Raymond A. Serway, Saunders
    College Publishing, 1990