MARMARA UNIVERSITY FACULTY OF ENGINEERING

PHYS 101
PHYSICS 101 Fall Semester COURSE DESCRIPTION

Institute/Department: Faculty of Engineering, Computer Sci. Eng. & Mech. Eng. & Environmental Eng.
Course Code   : Phys 101
Course Title   : Physics 101
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, C107-9)
Office Hours   : Monday 10:30-12:20, outside office hours, by appointment via e-mail
Class Hours and Locations:
Comp. Sci. & Mech. Eng.; Monday 08:30-10:20, Room 242; Wednesday 08:30-10:20, Room 244
Environmental Eng.   ; Monday 15:30-17:20, Room 554; Wednesday 10:30-12:20, Room 345
WEB Site   : http://www.geocities.com/fatihdumludag
Tel   : 0.216.348 5938 (Office: 1312, Nano Devices 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   : Vectors, Motion in One Dimension, Motion in Two Dimensions, The Laws of Motion, Circular Motion and Other Applications of Newton's Laws, Work and Energy, Potential Energy and Conversation of Energy, Linear Momentum and Collisions, Rotation of a Rigid Body About a Fixed Axis, Rolling Motion-Angular Momentum and Torque, Static Equilibrium and Elasticity, Oscillatory Motion, The Law of Universal Gravitation.

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. Fundamentals 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