NEAR EAST UNIVERSITY

FACULTY OF ENGINEERING
FALL 2015
COURSE OUTLINE

Course Code : PHY101 **Groups:** G1,G2,G3 **Course title:** General Physics I
Local Credit : 4 **ECTS credit :** 6
Lecturer : Assoc. Prof. Dr. Ismail Ruhi UMAN
E-mail: ismailruhi.uman@neu.edu.tr
Course hours : 3 **Laboratory hours:** 2
Schedule G1: Tue. 8:00– 9:50 Wed. 15:40 - 17:10 **Classroom G1:** V-101
Schedule G2: Wed. 10:00–11:50 Thu. 15:40 - 17:10 **Classroom G2:** V-101
Schedule G3: Tue. 10:00–11:50 Thu. 12:00 - 13:50 **Classroom G3:** 16-D12
Instructure Office: 16-H19 **Schedule:** Tuesday 15:00 – 15:50, Thursday 10:00-10:50
Type of Course : Must Course **Prerequisites:** - **Level of Course:** Undergraduate

CATALOGUE DESCRIPTION :

This is the first course in the two-semester fundamental sequence of calculus-based physics. It mainly covers mechanics, which is concerned with the motion of objects. Subjects covered include kinematics, Newton's laws of motion, gravitation, conservation of energy and momentum, rotational motion and static equilibrium.

LEARNING OUTCOMES : By the end of this course students should be able to;

- Understanding the meaning of fundamental physical laws and analyzing the relationships between them.
- To apply those laws for solving problems.
- Using appropriate instruments for defined physical measurements and developing skills in recording and reporting experimental results with their uncertainty.

LEARNING / TEACHING METHOD : The modes of delivery include formal lectures, discussions, problem solving and lab works.

METHOD OF ASSESSMENT:

Midterm Examination	Date: Nov. 3, 11:30	40%
Final Examination	Date: to be announced	45%
Laboratory work		15%

TEXTBOOK(S):

1. J. Walker, D. Halliday, R. Resnick, “Principles of Physics”, 10th Edition, Wiley,
2. R. A. Serway and R. J. Beichner , “Physics for Scientist and Engineers with Modern Physics”, 8th Edition, Thomson Brooks/Cole
3. Douglas C. Giancoli, Physics for Scientist and Engineers with Modern Physics, 4th Edition, Printice Hall.

TENTATIVE CONTENT & SCHEDULE

WEEK	**TOPICS**	**READINGS** (textbook 1)	**DATES**
1	No Classes		Sept. 14-Oct. 18
2	Sacrifice Holidays/ No Classes		Sept. 21-Sept. 25
3	Measurement, Units	Chapter 1	Sept. 28-Oct. 2
4	Motion along a straight line, Vectors	Chapter 2, pages 11-26 Chapter 3, pages 34-38	Oct. 5-Oct. 9
5	Vectors Motion in two and three dimensions, Relative Motion	Chapter 3, pages 40-43 Chapter 4	Oct. 12-Oct. 16
6	Force and motion I	Chapter 5	Oct. 19-Oct. 23
7	Force and motion II	Chapter 6	Oct. 26-Oct. 30
8	Midterm / No classes		Nov. 2-Nov. 6
9	Kinetic Energy and Work Vectors: scalar product	Chapter 7 Chapter 3, pages 44-45	Nov. 9-Nov.13
10	Potential Energy and Conservation of Energy	Chapter 8	Nov. 16-Nov.20
11	Center of Mass and Linear Momentum	Chapter 9, pages 182-209	Nov. 23-Nov.27
12	Rotation Rolling, Torque and Angular Momentum Vector Product	Chapter 10 Chapter 11, Pages 255-276 Chapter 3, pages 46-49	Nov. 30-Dec.4
13	Equilibrium and Elasticity	Chapter 12	Dec. 7-Dec.11
14	Gravitation	Chapter 13, Pages 308-328	Dec. 14-Dec.18