Yale University
Department of Physics

Physics 180  Fundamental of Physics

Instructor: Dr. M. Ghiassi-Nejad

Office: SPL 77

Email: mehdi.ghiassi-nejad@yale.edu

Meets: Mondays, Tuesday, Thursdays and Fridays (9:30-10:45)

Discussion Sections: Tuesdays and Thursdays (11:00-12:00)

Textbook: Halliday and Resnick, Fundamental of Physics, 10th edition

Course Description

This is a one-semester course, which gives an overview of vectors, Kinematics, Dynamics, Energy, Linear and Angular Momentum, Gravitation, Oscillations and Wave Mechanics.

Communication:

I will use the email system built into Canvas as the official form of communication for this class. All information, Changes to the schedule and other notices will be sent by means of Canvas’s email. You can email me by means of Canvas or regular email.

Pre and Co-requisites

Calculus at the level of Math 115 or equivalent is a prerequisite for Phys. 180

Goals of the Course:

The goal of PHYS 180 is to provide a very good knowledge in physics in such a way that students are ready to continue in science and engineering majors and for medical schools. It also provides strong foundation for students to think like a physicist.
Course requirements and student evaluation:

A. Students must attend all lectures and discussion sections. Class participation is considered part of grades.
B. Text messaging in class is not allowed.
C. Students should be prepared to discuss assigned readings and homework problems.
D. Homework problems will be assigned (see homework section). Assignments and solutions will be posted on Canvas. No late homework will be accepted.
E. There will be three tests. The third test will replace the final.

Student Evaluation:

1- Class participation 10%
2- Participation in discussions 10%
3- Homework Assignments 20%
4- Tests (3) 60%

Important dates:

Test 1 06/04/2019 15%
Test 2 06/14/2019 20%
Final 06/28/2019 25%
Tentative Calendar:

Week 1
Vectors, Kinematics
Chapters 3, 2, 4

Week 2
Dynamics
Chapters 5, 6

Week 3
Work, Energy and Momentum
Chapters 7, 8, 9

Week 4
Rotation, Torque and Angular Momentum
10, 11

Week 5
Gravitations, Oscillations and Waves
Chapters 13, 15