Physics 181 Electricity and Magnetism

Instructor: Dr. M. Ghiassi-Nejad

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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 Chapters 21-36

Course Description

This is one-semester course which gives an overview of electro-static, magneto-static, E&M waves and circuits. Toward the end, we will discuss some interesting subjects in optics.

You will learn a logical and consistent mathematical framework to discuss electromagnetic fields.

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. 181. We will make extensive use of integral and differential calculus. Please refer to the online course information site for specific details on class prerequisites.
Goals of the Course:
The goal of PHYS 181 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 07/07/2020 Chapters 21-23 15%
Test 2 07/17/2020 Chapters 24-28 20%
Final 07/31/2020 Chapters 21-36 25%