Syllabus for Physics 222 Spring 2009

Meeting times: MWThF 8:00-8:50 am in SAM 206
M: Lab 1:00-1:40 pm in SAM 205

Instructor: François Lepeintre

Office Hours: SAM 212: M 12:20-1:00pm, and W, Th, F 9:00-9:50am

Phone: (206) 587-5438

Textbooks: Required:
"Physics for Scientists and Engineers" by Randall D. Knight.
"Tutorials in Introductory Physics" by Lillian McDermott, Peter Shaffer and the Physics Education Group.

Prerequisites: Phys 221 with 2.0 or better and Math 152 with 2.0 or better.

Course Objectives: I hope that after taking this class you will have a better idea of what it means to think Physics. The goal is to help you develop your Physics sense (and have fun doing so!). At the end of the class, you should know how to approach a problem dealing with electricity or magnetism and solve it. This means understanding the important physics concepts such as field, potential, current, emf, electric and magnetic energy, etc... It also means knowing how to use mathematics in the context of physics (yes this is a calculus based course).
Course Content: This class covers the basic principles of electricity and magnetism. We will study the following topics: Newton's gravitational law, electric field and potential, DC circuits, magnetic field, magnetic induction and possibly RL, and LC circuits. We should cover chapters 13, and 25 through 34 of the text.

Course Format: We will meet four times a week for an interactive lecture. A lecture is not a monologue on the part of the instructor. Read the text before coming to class and ask questions (if not, I will ask you some). There is also a 2 hour lab, during which you will have the opportunity to apply the concepts covered in lecture.

Grading: 2 midterms and one final: 65%
The final counts as 2 midterms. Out of the four scores (2 midterms and the final that counts as 2 midterms), the lowest score is dropped.

Quizzes: 10%

Lab write ups: 15%

Homework: 10%

Exams: There will be 3 exams: 2 midterms and 1 final. Exam dates will be given later in the quarter. There won't be any makeup exams.

Homework: Homework will be assigned once or twice a week. The problem sets are available on the class web site and should be completed using MasteringPhysics (to register use the class ID: PHYS222SP2009).

Though you may discuss how to approach a problem with other students in the class (and I encourage you to do so), your final work has to be yours.

Your homework must be turned in on time. I won't accept any late homework.

Lab: We will meet weekly for a 2 hour lab. During this time, we will either go over a tutorial, or conduct an experiment, or go over
problems together on the board.

Details about the write-up will be given with each lab.

Attendance: Attendance in lecture will not be taken. It is all too common that those who don’t come to lecture on a regular basis will not be able to do well in the course. Although attendance in lecture will not be taken, attendance in lab is required.

Special Assistance: If you need course adaptations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please see me during my office hours as soon as possible. I am happy to help you in any way I possibly can.

My contract to you! If you come to class, do your homework and genuinely try to learn the concepts, I promise you to do my best to make your time as valuable as I can!

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