Syllabus for

Enriched Physics 2 – Electromagnetism

PHY 2061, Fall 2006, Sect. 0829

Instructor: Prof. Darin Acosta
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Class Hours: Tuesday and Thursday, Periods 4-5 (10:40–12:35 am), 1002 New Physics Building

Office Hours: Monday and Wednesday Periods 6 and 7 (1:00–3:00pm), or other times by appointment.

Homework problems are based on WebAssign (separate purchase) and are in common with the text Halliday, Resnick and Walker, Fundamentals of Physics 7th edition, Parts 3 and 4.
(The first textbook is more explanatory than the second, but you could consider purchasing the second one instead with a bundled WebAssign code, supplemented by lecture notes.)

Web Page: http://www.phys.ufl.edu/~acosta/phy2061/
Includes schedule, homework assignments, solutions, lecture notes, etc.

Grading: Three exams, two during the semester and one during finals week, are worth a total of 75% of the final grade. Each exam covers material only since the last exam. Exams are closed book, but a calculator is required. Format of exams is worked out solutions (i.e. not scantron bubble sheets). Make-up exams only for excused school functions or documented dire emergencies.

Weekly web-based homework counts towards 20% of the final grade. We will use the WebAssign service for the homework problems (separate license purchase). Collaboration on homework is accepted and encouraged, but you must do the problems and enter the solutions yourself. Homework will typically be assigned on Tuesday mornings, and due by 11:59pm Wednesday the following week.

Class participation counts for another 5%. This is based on regular attendance and answering questions posed in class (and asking questions as well!).

Guaranteed grading scale: A: 85%; B+: 80%; B: 70%; C+: 65%; C: 55%
Academic Honesty:
Students are reminded that they are to abide by the Honor Code of the University of Florida. Dishonesty in any form will not be tolerated; cheating during an exam will result in a failure for the exam and possible failure for the course.

Disabilities:
Students with disabilities that require any special arrangements for homework or exams must report such needs to the instructor at the start of the semester along with supporting documentation from the Dean of Students Office.

Course Overview:
This course covers the laws of electricity and magnetism, which have been developed over the past several centuries but have recently led to a microelectronic revolution. Just consider all the fantastic discoveries that made communication via a cell phone possible! As this course is part of the University Honors program (aka the Accelerated Program in the Physics Department), it is enriched. This means that we will go into more depth than the material presented in the corresponding Physics 2 with calculus course, PHY2049, and will cover additional topics beyond those in your textbook. For example, we will incorporate Special Relativity into some of the material, and we will derive both the integral and differential forms of the electromagnetic laws that will allow us to understand why electromagnetic waves are predicted. Lecture notes for some topics will be made available from the web. The overall pace of the class will be high, as we cover one and sometimes two chapters of the textbook every week.

This course assumes that you have studied Newtonian mechanics in a previous calculus-based physics course (i.e. PHY2060 or PHY2048) and at least have co-registered in a vector calculus course (Calc 3). A “Math & Physics Refresher” is available from the course web page that summarizes the math and physics you should know or learn in preparation for (or during) this course.

The best way to succeed in this course is to attend lectures, ask questions, read the textbook and online lecture notes (try before the lecture!) and to do the assigned homework problems. Even better: try solving other additional problems from your textbook.