Syllabus for

*Enriched Physics 2 – Electromagnetism*

**PHY 2061, Fall 2005, Sect. 0829**

**Instructor:** Prof. Darin Acosta  
New Physics Building, room 2035  
Tel: 846-3144  
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**Class Hours:** Tuesday and Thursday, Periods 4-5 (10:40–12:35 am), 1002 New Physics Building

**Office Hours:** Monday Period 6 (1:00–2:00pm) and Wednesday Period 7 (2:00–3:00pm), or any other time you can catch me


**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 recommended.

Weekly web-based homework counts towards 20% of the final grade. Collaboration on homework is accepted and encouraged. Homework will typically be assigned on Tuesday mornings, and due by 11:59pm Wednesday on 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!).

Tentative 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.

**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, or 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 laws of electromagnetism. Lecture notes for some topics will be made available from the web. The overall pace of the class will be high, as we cover roughly one chapter of the textbook every week.

This course assumes that you have studied Newtonian mechanics in a previous calculus-based physics course (i.e. PHY2060) 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 (try before the lecture!) and to do the assigned homework problems. Even better: try solving other additional problems from your textbook.