Syllabus for

Physics with Calculus 2 – Electromagnetism

PHY 2049, Spring 2008

- Class Hours: Monday, Wednesday, Friday: 1001 New Physics Building Period 4 (10:40am–11:30am) or Period 5 (11:45am–12:35pm)
- Instructors: Prof. Darin Acosta New Physics Building, room 2035 Tel: 846-3144 Office Hours: Mon. and Wed. Period 7 (1:55–2:45pm)

Prof. Selman Hershfield New Physics Building, room 2138 Tel: 392-9387 Office Hours: Thur. and Fri. Period 7 (1:55-2:45pm)

- E-mail: Always send to: <u>phy2049@phys.ufl.edu</u> Note that homework help is to be discussed during your Discussion section and during office hours, not through e-mail.
- **Textbook**: Halliday, Resnick and Walker, *Fundamentals of Physics* 8th edition, published by Wiley. Parts 3 and 4 (Volume 2).



Web Page:	http://www.phys.ufl.edu/courses/phy2049/spring08/
	Includes announcements, schedule, homework assignments, exam solutions, etc.
Grading:	 Your final grade is based on several activities: In-class participation questions using H-ITT remote system (5%)
	• Homework assignments (performed online at home using Wiley Plus system) and discussion section quizzes (combined total worth 25%)
	• Best two midterm exams out of three (during regular lecture period, each worth 20%)
	• One final exam (2 hours, rooms & time announced later, worth 30%)
Grading sca	le: A: 83%; B+: 75%; B: 67%; C+: 59%; C: 51%; D+: 43%; D: 35%
H-ITT:	In class questions will be posed for student feedback using the H-ITT remote system

H-ITT: In class questions will be posed for student feedback using the H-ITT remote system (RF transmitters are preferred, but IR ones also will work), allowing immediate feedback to the students and instructors on the understanding of course concepts. Simply responding to a posed question will get you 1 point credit for the question, while responding correctly will get you 2 points credit. Your grade will be determined from the total points you accumulated divided by the maximum possible

minus 10%, i.e. there is a 10% forgiveness to account for routine illnesses, technical problems with your remote, failure to click the answer on time, having a dead battery in your remote, etc.

Your H-ITT remote must be registered for PHY2049 – see further important information here in order to receive proper credit: <u>http://www.phys.ufl.edu/~hitt/</u>

We will practice using the remotes during the first week of classes and start using the remotes for credit on the Monday of week 2 (Jan. 14).

- **Homework:** Weekly web-based homework is assigned and graded through the Wiley Plus system. (<u>http://www.wileyplus.com/</u>) If you purchased the textbook for PHY2048 for the summer or fall 2007 semesters, you will already have a Wiley PLUS code valid for this semester's PHY2049 (use the same username and password as your previous semester). If you do not have a Wiley Plus code from a previous semester, then you have two options:
 - 1) Buy a textbook, which will not include a code, and the publisher has supplied codes which we will give you and stamp your textbook.
 - 2) You can purchase a code only (no text) from the Wiley Web site.

Typically 8 problems (some may contain multiple parts) are assigned from your textbook per homework set, and a total of 11 sets will be assigned. You get 5 tries at submitting a correct answer for each question.

Collaboration on homework is accepted and encouraged, but each student must do his/her own assignment. The numbers used on each homework problem are randomized for every student. Homework will be due by 11:00pm Friday on weeks without exams. There will be no extensions or make-ups for the homework. All assignments will be posted by the beginning of the semester, and solutions will be posted shortly after the assignments are due. Since homework disruptions, computer viruses, etc. may occur, **you are strongly advised not to wait until the last minute to work on your homework**.

Your initial access to the online homework system depends on when you registered for the course. If you preregistered, you should have gotten an e-mail message to your Gatorlink account that give you your login name (your Gatorlink address) and password to log onto the system at <u>http://edugen.wiley.com/edugen/class/cls52316/</u>. If you did not receive an e-mail with this information, go to the above URL, click "Register" and follow the instructions there. To property get credit for your efforts your login name must be your Gatorlink e-mail address (including @ufl.edu). To access the online homework you will need to enter your access code.

Quizzes: A total of 9 quizzes will be given during the Discussion sections. The quiz will be based on the homework that was due in the previous week. Specifically, each discussion section will get a question based on, but not identical to, one of the

homework problems. The problems will be chosen randomly for every discussion section. Partial credit will be given on quizzes. If you have a documentable university excused absence, you should see your TA for a makeup quiz as soon as possible.

Homework+Quiz Grading:

Each week you will get a single percentage score for the homework+quiz part of your grade – not separate scores for homework and quizzes. To get this grade your homework percentage is multiplied by your quiz percentage. For example, if you scored 100% on your homework and 100% on your quiz, then you get 100% for that week. If you scored 100% on your homework and 50% on your quiz, then you get 50% for that week. If you scored 50% on the homework and 50% on the quiz, then you get 25% for that week. If there is no quiz for a given homework assignment, then your score for that week will just be the homework percentage. At the end of the semester we will average all of your weekly percentages to get your net homework+quiz percentage. To allow for a possible missed homework assignment, we will divide this net homework+quiz percentage by 0.9 at the end of the semester. Thus, you can get 90% in your net homework+quiz percentage and still receive 100% for this segment of the course. (You can not receive more that 100%.)

Exams: Each midterm exam covers material since the last exam (chapter coverage is listed on the schedule for the course), while the final exam is cumulative of all the course material. There is one drop offered of the three in-class midterm exams to accommodate any unavoidable absences due to illness, family emergencies, or other valid university excused absences. The final exam is mandatory with no make-up.

The format of all exams will be multiple choice problems (about 10 questions for midterms and 20 questions for the final) using bubble sheets (ScanTron forms) for submitting answers. The order of problems and answers is scrambled—each student receives a unique exam sheet and must mark on his/her ScanTron sheet the 5 digit exam code (upper right corner of exam sheet) so that the computer knows the exact order of questions and answers for that exam. You must also bubble-in your name and your 8 digit UFID. The answers marked on the ScanTron sheet are final, not what was necessarily circled on your question sheet (which also must be turned in after the exam with your name).

You must show a photo-ID during the testing period to the instructors. Students in Period 4 must wait until the end of the period before leaving the classroom.

Exams are entirely closed book, but the instructors will post online a formula sheet at least one week before the exam and will also be distributed with the exam. A calculator is recommended (simple ones will do: arithmetic, log, exp, powers, roots). Please bring a pencil, eraser, sharpner, and spare batteries for your calculator for exams.

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 or quiz will result in a 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, or that allow a DVD player to work.

This course assumes that you have studied Newtonian mechanics in a previous calculusbased physics course (*i.e.* 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 some of the math and physics you should know or learn in preparation for (or during) this course. This is a challenging course, going beyond what you may have learned in high-school both in the physics concepts and in the mathematics. Do not underestimate the time it will take to learn the material and to solve problems.

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.