

## **COURSE SYLLABUS**

### **PHY 139 – College Physics II or “Electricity and Magnetism”**

**Credit Hours: 3**

**Fall 2007**

**Farrington Building, Room 107**

**11:00 – 11:50 MWF**

**Instructor:** Dr. Joel W. Walker  
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**Office Location:** Farrington, room 204 D

**Office Hours:** 9-11 & 2-3 MWF

**Course Description:** A modern treatment is made of the laws and principles of Electro-Magnetic theory. Derivations are carefully done using a non-calculus approach and considerable problem work is required. The laboratory work consists of quantitative experiments. Prerequisite: Physics 138 and Credit for MTH 163 or equivalent.

**Required Textbook:** College Physics, 7<sup>th</sup> Edition by Serway and Faughn

**Required Supplies:** Pencils, Pens, Paper, Scantron “Quiz Strips” and a calculator with trigonometric functions.

Course Goals:	This course is designed to introduce many key elements of classical electro-magnetic theory to students majoring in biology and related programs. This is a deep subject which forms the foundation for all of modern particle physics. We will study each of the basic phenomena which comprise the theory, and also attempt to convey some understanding and intuition of their greater unified structure. An important course objective will be helping each student to recognize the real-world application of mathematics to physical processes. This will be accomplished in a trigonometry-based approach, with heavy use of in-class example problems. While calculus may be used on occasion as a teaching supplement (and some background here will be a great conceptual aid to any student), such knowledge will not be required on any graded assignment.
Assignments:	Homework assignments will be given for each chapter covered in the course. This provides for a straightforward opportunity to boost your overall course grade, while performing the necessary practice necessary for success in the class. Failure to participate will almost certainly damage your test and quiz performance. Regular, personal application of the concepts encountered is essential to mastery of the required material. Furthermore, these problems will be a valuable insight into what material is considered important by your instructor.
Study Groups:	You are encouraged to find study partners who are also enrolled in physics 139, for comparing and assisting in the completion of homework. However, it will be greatly to your benefit to attempt all problems alone prior to such meetings, or alternatively to intersperse private and group work during the meeting.
Quizzes:	Problem-solving oriented quizzes (and occasionally multiple choice) will be given in class regularly. Two quizzes will be dropped from grading for the semester. With rare exceptions (e.g. prolonged medical absence), additional drops will not be granted.
Exams:	Three major examinations will be given during the semester in addition to a comprehensive final. If a special situation exists which would cause you to miss an exam, this <b>MUST</b> be made known to me prior to the date of the test if possible. Otherwise, a makeup will be allowed in only the <b>MOST EXCEPTIONAL</b> situations, evaluated on a case-to-case basis.
Grading Plan:	Quizzes, Homework and the Final will each count 20%, while the three semester exams together make up the remaining 40%.

**Class Rules:** All class members are expected to respect the proceedings of this course, and the learning environment of their fellow students. This principle has several practical implications, some of which are enumerated below.

- 1) Do not cheat. Violators are subject to dismissal on a 1<sup>st</sup> offence.
- 2) Regular punctual attendance is expected of all class members.
- 3) **There is to be absolutely no use of Cellular phones** in the classroom, for either voice or text communication. Parents of young children and professionals who may reasonably expect some chance of an emergency contact should silence their phones, and discreetly excuse themselves if it becomes necessary to take a call. All others should turn their phones off entirely.

**Email Guidelines:** Email communication with your instructor should be made in a professional manner. Instant-Message style notes are not acceptable in a business or academic setting. All email should employ the standard features listed following.

- 1) Include your name, course number and class meeting time.
- 2) Include a proper salutation, body and closing.
- 3) Make a reasonable attempt at correct grammar, capitalization, punctuation and spelling.

### **University Policies**

The following are university-wide official policies which apply to this course. Additional details are available at the web address: <http://www.shsu.edu/syllabus/>

**Academic Dishonesty:** Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom.

**Classroom Rules of Conduct:** Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination. Students may tape record lectures provided they do not disturb other students in the process.

**Student Absences on Religious Holy Days:** Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work.

**Students with Disabilities Policy:** It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should visit with the Office of Services for Students with Disabilities located in the Counseling Center.

**Visitors in the Classroom:** Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.