Instructor

Dr. Jim Clarage, Robertson Hall, room 109
Phone: 713-525-6979
Email: claragj@stthom.edu

(Please put the course name in the Subject line of your emails, e.g., “Gen Phys I Lab”, and note I do not read email on Sundays or late at night)

Office hours

M/W/F: 9:30am -11am
Tues: 10am - 12:30pm
Other times by appointment.

Text


Course Description


Course Objectives

Students will understand the topics in the course description. This understanding should include both conceptual understanding and problem solving with calculus and vector based mathematical tools.

Prerequisite

Prerequisite: PHYS 2333, MATH 1432. In other words you must already having working knowledge of 1st semester university physics, including the mathematics used. You should also own and operate a scientific or engineering calculator. Mathematics is the language of physics.

Blackboard

Blackboard (http://gregory.stthom.edu) will be used to post grades, assignments, announcements, and occasional quizzes. So you need access to the internet during the semester. All tech questions/problems (e.g., your account, password, browser problems, etc) should go to the university Help Desk, Robertson B112, (713) 525-6900

Grading

Your final semester grade will be computed from:

55% semester exams (three in-class exams)
25% final exam (comprehensive)
10% homework
10% attendance, participation, class quizzes

Each homework assignment is typically graded out of 10 points, each quiz 5 points The exams are graded up to 100 points. Your lowest semester exam grade (which may be a missed exam) will be replaced by your score on the final exam if this helps your final grade.
The letter grade for the course is based on these course percentages:
A (94-100), A- (90-93), B+ (87-89), B (84-86), B- (80-83), C+ (77-79), C (74-76), C- (70-73), D+ (67-69), D (60-66), F (0-59)

Homework and Quizzes

"Students often tell me, 'I understand the concepts; I just can't do the problems.' They are fooling themselves. The only sure test of whether you understand the concepts is precisely your ability to work the problems."

- Griffiths, D. J. (author of several physics textbooks)

Homework will be assigned for each chapter, and is due the first class period after we finish completing a chapter topic (typically homework will fall due on Monday). To receive credit you must:

- hand in at the beginning of class
- show all your work (not just final answers)
- be neat and legible (if I can't read it I can't grade it)
- put a box or circle around your final result
- start a new page for each problem (except for Conceptual Questions)
- staple pages together
- at the top of the first page write your name, the chapter number, and a list of all problem numbers

You can often receive credit for a problem even if you do not get the correct answer as long as you show serious effort in tackling the solution.

Quizzes will be given to assess your reading of the material before you come to class. They will be given either randomly or scheduled.

All homework assignments (and scheduled quizzes) will be posted in Blackboard under “Assignments.” **So make to sure check Blackboard at the beginning of each week.** Late work is not accepted.

Attendance

“The University expects all students to be regular and punctual in class attendance. Frequent unexplained absences may result in a student being administratively withdrawn from the course or in a grade reduction or failing grade, at the discretion of the faculty member” (Page 67 Undergraduate Catalog 2007-2009). Each unexcused absence from class, including absence at the start of the lecture, may result in a one-point decrease in the final semester numerical grade, or in dropping one homework or quiz score. Conversely, 10% of your total grade is based upon your class attendance and participation. Attendance and participation are recorded with either the attendance sheet or iClicker questions.

Exam Policy

Students are expected to be present for each of the exams as scheduled. Make-ups are only allowed in serious circumstances. If for some reason you must miss an exam you are required to: i) let the instructor know BEFORE the regularly scheduled exam time that you will not be able to make the exam; ii) be prepared to document why you missed the exam. Use the email and/or phone information above to contact the instructor.

Accessibility and Accommodations

If you have a documented disability that will impact your work in this class, please contact Counseling and Disability Services Office in Crocker Center. This office can be reached at (713) 525-6953 or 2169.
Academic Honesty

All students are subject to the university’s Policy on Academic Dishonesty and the UST Student Handbook. This extends to any quizzes taken online via Blackboard.

Advice

› Come to class
› Read, as best you can, textbook chapters before coming to class.
› Do all assigned homework problems
  (and then some... physics is solving problems, not memorizing facts).
› Find something good, true or beautiful in the subject.
Class Schedule - NOTE chapters not necessarily covered sequentially with text.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>24-Aug</td>
<td>Introduction.</td>
<td>Electric force, field (ch.20)</td>
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<tr>
<td>31-Aug</td>
<td>Electric potential (ch.22)</td>
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<tr>
<td>7-Sep</td>
<td>Labor Day (Monday)</td>
<td>Capacitance (ch.23)</td>
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<tr>
<td>14-Sep</td>
<td>Current and resistance (ch.24)</td>
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<td>(begin next chap)</td>
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<tr>
<td>21-Sep</td>
<td>DC circuits (ch.24,25)</td>
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<td>Review</td>
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<tr>
<td>28-Sep</td>
<td>Exam 1</td>
<td>Magnetism (Lorentz, ch.26)</td>
<td>(Biot-Savart, ch.26)</td>
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<tr>
<td>5-Oct</td>
<td>Ampere’s Law, ch.26.8</td>
<td>Field patterns: Ampere’s and Gauss’ Law, Learning Activity (ch.21)</td>
<td>Field patterns: Gauss’ Law (ch. 21)</td>
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<td>12-Oct</td>
<td>Mid-semester Break (Mon,Tues)</td>
<td>Field patterns: Gauss’ Law for B (ch.21). Preview to Maxwell’s equations.</td>
<td>Faraday’s Law, induction (ch.27)</td>
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<td>19-Oct</td>
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<td>Review</td>
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<tr>
<td>26-Oct</td>
<td>Exam 2</td>
<td>Maxwell’s equations, EM waves (ch.29). Review waves from Phys I (ch. 14)</td>
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<td>2-Nov</td>
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<td>Light: reflection, refraction (ch. 30)</td>
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<td>9-Nov</td>
<td>Mirrors, lenses, instruments (ch.31)</td>
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<tr>
<td>16-Nov</td>
<td>Light: interference, diffraction (ch.32)</td>
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<td>23-Nov</td>
<td>Exam 3</td>
<td>Thanksgiving Break</td>
<td>Thanksgiving Break</td>
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<td>30-Nov</td>
<td>Relativity theory (ch.33)</td>
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<td>Quantum theory (34,35)</td>
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<td>7-Dec</td>
<td>Semester Review</td>
<td>Final Exam. ?? TBA</td>
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<td>Last day classes (Mon Dec 7)</td>
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The instructor reserves the right to make reasonable changes to the syllabus during the course. In this event any necessary changes will be posted online and announced during class.