Instructor

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Course

This course is the second half of a two-semester introductory sequence. This semester we will focus on electromagnetism, one of the four fundamental forces of nature. The ordering of topics this semester will be quite different from the traditional sequence. We will start with optics, the study of light and how it interacts with matter. We will then learn about electric fields and electric potential. Next, we will see how to apply those concepts to study electric circuits and currents (moving charges). Finally, we will discuss the magnetic field, and how electric and magnetic fields interact with each other.

- The textbook for this course is *Physics, Volume 2*, 3rd or 4th or later ed., by J. S. Walker (Pearson Prentice Hall). The 3rd is the “blue cover” edition. You may also use older editions if you wish, but you are responsible for knowing about any changes in content.
- *Experiments for an Introductory Physics Course*, latest ed., Hayden-McNeil Publishing. This is the same lab manual from the first semester of physics (PHYS1111/1211), and will be used in your lab section.
- A Turning Technologies ResponseCard NXT (the “clickers”). Bring this to every class; we will be using them throughout the semester. Check to make sure you have a fully charged battery for every lecture. Make sure to become thoroughly familiar with its operation; and especially how to set up your UGA MyID (*not your UGA 810 ID-number!* ) as your clicker ID.
- A simple scientific calculator for exams, which must be *non-programmable, non-graphing, and non-symbolic*. Examples of acceptable calculators include the TI-30X series or the Sharp EL-531. The use of calculator graphing, algebra-solving, or programming functions will *not* be permitted for any exam, nor will PDAs, cellphones, etc.

Online Course Resources

- The course Website at [http://www.physast.uga.edu/classes/phys1112/plascak](http://www.physast.uga.edu/classes/phys1112/plascak) will be used to disseminate some course information: homework assignments, test solutions, practice problems, etc.
- Many important announcements, as well as some course material, will be sent to your UGA MyID email address: "...@uga.edu" where "..." is your UGA MyID. It is very important that you check your UGA MyID email daily, at [http://email.uga.edu/](http://email.uga.edu/). Make sure to carefully read every message with "PHYS1112" in the "Subject" line. You will be automatically subscribed to this email list with your UGA MyID email address only.
- Online assignments are an essential part of the course. You will access them with an account on the LON-CAPA system via [http://spock.physast.uga.edu/](http://spock.physast.uga.edu/) or via the backup site [http://tuvok.physast.uga.edu/](http://tuvok.physast.uga.edu/).
• Grade information will be made available through the eLearning Commons website at http://elc.uga.edu/.

Other Student Resources

• The office hours will be on Mondays, Wednesdays and Fridays from 11:00am to 12:00pm. The students are encouraged to see the instructor during those hours. If you cannot come to these regular office hours, or need additional help, please set up an appointment (by email, by phone, or in person) to see the instructor outside of class, or just drop by on room 313B.

• The textbook publisher has a companion Website for an earlier edition, at the URL http://www.prenhall.com/Walkerphysics/. This site contains summaries and practice problems for each chapter, and is a good way to increase your confidence and familiarity with the material.

• There is a Student Study Guide with Selected Solutions for this textbook that may be useful, although students have given this guide mixed reviews. Information on this and other resources is provided in your textbook.

• Tutors are available either through the UGA Tutoring Program at Milledge Hall, see http://www.uga.edu/dae/services/tutoring/tutoring_index.html; or directly through the Department of Physics and Astronomy http://www.physast.uga.edu/tutors/.

Exams

There will be three in-class midterm Tests and one cumulative Final Exam. All Tests and Exam are closed book and closed notes. When necessary, a scientific calculator that is non-programmable, non-graphing, and non-symbolic (calculators such as the TI-83 or TI-84 are not allowed) can be used for arithmetic only in solving the tests and exam. The tentative material to be covered in each Test, as well as the Test dates, is given in Table I. It is the students responsibility to stay informed about all announcements concerning this course by attending the lectures.

Homework

Students will have weekly homework assignments. The assignments will generally be due every Friday, although class pacing and scheduling may necessitate different due dates, which will be announced in class. Assignments will be posted online, and most problems will require you to submit your answers on the Web. However, some assignments may also have a handwritten component, which you should hand in to the instructor directly at the beginning of class.

Regular reading is an important part of your preparation for class. Don’t expect to understand everything in the textbook at first sight! However, your learning effectiveness in class will depend on having encountered the material prior to class. You should jot down notes and questions as you read; this will aid in organizing your class notes and will remind you to ask for clarification.

Throughout the semester, you will be asked in class to answer conceptual and quantitative questions, both individually and in small groups, and usually using the “clickers”. Your responses will be graded primarily on participation, and will be used to determine the letter grading when close to the border. These activities allow you to demonstrate your sincere effort and active engagement in the class.

Extra Credit for End-of-Semester Online Course Evaluation

A 0.5% bonus will be added to your final exam percentage score if you submit your online student course evaluation for this PHYS1112 course during the designated evaluation period at the end of
the semester (dates to be announced) at the web site
https://evals.physast.uga.edu/.

No other extra credit will be given in this course.

Academic Honesty

The University of Georgia has a comprehensive policy on academic honesty, described in a document entitled *A Culture of Honesty*. This document is available through the Office of the Vice President for Instruction or online at http://www.uga.edu/ovpi/. This policy covers all academic work. All UGA students are responsible for knowing and understanding this policy.

Student Responsibilities

- You are responsible for all topics discussed in class, all class announcements, and all assigned textbook reading (even if some sections aren not explicitly covered in class). Absence does not excuse you from this responsibility. While attendance is not strictly mandatory, your understanding of physics (and your grade) will suffer if you skip class.

- You are responsible for the material covered in the assignments. Just as with other areas of learning, your physics problem-solving skills will improve only by practicing regularly and conscientiously. You won't get much learning value from homework if you leave it for the last minute, or depend on the efforts of others.

- Attend your assigned lab section and follow the TAs' instructions. Refer to the lab syllabus for more information. If you have lab-related questions, please see or email Mr. Tom Barnello in Room 310 (Email: tjbar@physast.uga.edu, Phone: 706-542-2903)

- Ask for clarification on anything you find unclear, ambiguous, or unspecified. This includes both course policies and physics topics. Ignorance is never a valid excuse.

- Know the policies concerning withdrawals and incompletes, published in the UGA *Undergraduate Bulletin*.

Grading Policy and Assignments

Your final score will be determined from your overall performance in the class taking into account tests, final exam, laboratory, and homework grade with the following weights:

\[
FS = 0.17(T1+T2+T3) + 0.25FE + 0.15LB + 0.09HW,
\]

where FS is the final percentage score, T1, T2, and T3 are the percentage scores of the three Tests, FE is the percentage score of the Final Exam, LB the overall percentage score of the Laboratory section of the course, and HW is the homework. In case the percentage score of the lowest-scoring Test is less than that of the Final Exam, the score of the Final Exam FE will be substituted for that one lowest-scoring Test only. In case of an excused absence from any Test, the score of the Final Exam FE will be substituted for the score of that test. It is the instructor's discretion to determine what constitutes an excused absence. No make-up tests or quizzes will be given. The overall letter grade in this course will follow the conditions below:

FS ≥ 93A; ≥ 88A-; ≥ 82B+; ≥ 77B; ≥ 72B-; ≥ 65C+; ≥ 60C; ≥ 55C-; ≥ 40D; ≥ 0F
Schedule

The schedule below is approximate and subject to modification, \textit{possibly including changes in test dates}. Significant schedule changes will be announced in class. It is your responsibility to keep track of all such schedule changes by attending class and by regularly checking your UGA MyID email and the “Announcements” on the PHYS 1112 course web site.

Note that the midpoint withdrawal deadline is the 20th of March, 2014.

Table 1: Classes, chapters, sections, and important dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Classes</th>
<th>Chapter (Sections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 06-08-10</td>
<td>1-2-3</td>
<td>Chap. 26 (Ss. 1-5)</td>
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<tr>
<td>2</td>
<td>Jan 13-15-17</td>
<td>4-5-6</td>
<td>Chap. 26 (Ss. 6-8)</td>
</tr>
<tr>
<td>3</td>
<td>Jan 22-24</td>
<td>7-8</td>
<td>Chap. 27 (Ss. 1-5)</td>
</tr>
<tr>
<td>4</td>
<td>Jan 27-29-31</td>
<td>9-10-11</td>
<td>Chap. 28 (Ss. 1-4)</td>
</tr>
<tr>
<td>5</td>
<td>Feb 3-5-7</td>
<td>12-13-14</td>
<td>Chap. 28 (Ss. 5-7)</td>
</tr>
<tr>
<td>6</td>
<td>Feb 10-12-14</td>
<td>15-16-17</td>
<td>Chap. 19 (Ss. 1-4) \textbf{Test # 1 Feb 10 26-28}</td>
</tr>
<tr>
<td>7</td>
<td>Feb 17-19-21</td>
<td>18-19-20</td>
<td>Chap. 19 (Ss. 5-7)</td>
</tr>
<tr>
<td>8</td>
<td>Feb 24-26-28</td>
<td>21-22-23</td>
<td>Chap. 20 (Ss. 1-6)</td>
</tr>
<tr>
<td>9</td>
<td>Mar 3-5-7</td>
<td>24-25-26</td>
<td>Chap. 21 (Ss. 1-6)</td>
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<td>10</td>
<td>Mar 10-12-14</td>
<td>Spring Break</td>
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<tr>
<td>11</td>
<td>Mar 17-19-21</td>
<td>27-28-29</td>
<td>Chap. 22 (Ss. 1-4)</td>
</tr>
<tr>
<td>12</td>
<td>Mar 24-26-28</td>
<td>30-31-32</td>
<td>Chap. 22 (Ss. 5-7) \textbf{Test # 2 Mar 28 19-21}</td>
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<tr>
<td>13</td>
<td>Apr 31-2-4</td>
<td>33-34-35</td>
<td>Chap. 23 (Ss. 1-5)</td>
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<td>14</td>
<td>Apr 7-9-11</td>
<td>36-37-38</td>
<td>Chap. 23 (Ss. 6-10)</td>
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<td>15</td>
<td>Apr 14-16-18</td>
<td>39-40-41</td>
<td>Chap. 25 (Ss. 1-3)</td>
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<td>16</td>
<td>Apr 21-23-25</td>
<td>42-43-44</td>
<td>Chap. 25 (Ss. 4-5) \textbf{Test # 3 Apr 25 22,23,25}</td>
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<td>17</td>
<td>Apr 28</td>
<td>45</td>
<td>Review</td>
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<tr>
<td>18</td>
<td>Mond. May 5</td>
<td></td>
<td>\textbf{FINAL EXAM 8-11 am}</td>
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