University of Toledo
Fall 2010

Physics 2140, Section 20
Physics for Science and Engineering Majors II

Lectures: Mondays and Wednesdays, 5:30–7:30pm in MH 2002
Labs: Various days and times. You must be registered for a lab!

Instructor: Dr. Scott A. Hill
Visiting Assistant Professor
Ph.D. in physics, University of Chicago, 2002
Email: scott.hill@utoledo.edu  AIM: doogadgit
Office: McMaster Hall 4008  Phone: (567) 343-2284 (567-DIDACTIC) or x2319
Daughter: Miriam, 3 years old

Class Website: http://phys2140E.nfshost.com

Office Hours in my office (MH4008):

<table>
<thead>
<tr>
<th>Monday</th>
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<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Other times</th>
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<tr>
<td>9:30-10:30am</td>
<td>10:00-11:00am</td>
<td>7:30-8:30pm</td>
<td>9:30-10:30am</td>
<td>9:30-10:30am</td>
<td>by appointment</td>
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“Virtual” office hours most evenings by Instant Messenger (doogadgit); feel free to send a message, though I may ask to get back to you later.

Materials and Resources

Text: Fundamentals of Physics by Halliday, Resnick, and Walker, 8th edition (ISBN 0471758019 or 0470044721). If you do not already own this book from a previous class, you might consider buying just the second half of the book from an online bookseller (ISBN 0470044748). Earlier or later editions will also be fine; I do not follow the book closely and will not assign homework from it. You do not need the online supplement to the textbook.

Calculator: A scientific calculator is required. It does not need to be a graphing calculator, but needs to have the trigonometric functions and scientific notation; you can get one for $10–$20. Bring it to all classes and exams, unless otherwise notified. You may not share calculators during exams, and you may not use a cell phone, laptop, or similar device as a calculator during exams either.

Flash Cards: Please purchase a set of flash cards from the bookstore, and bring them to every class. The cost is minimal ($3-$4), but see me if it is a hardship, or if you misplace your original set.

Website: This class has a website at http://phys2140E.nfshost.com, which is updated frequently. There you can find a copy of the syllabus, as well as homework assignments with solutions, quiz and exam solutions (only after they’ve been given, of course!), class news, and access to your grades. Most of these materials will not be handed out in class, so please visit the website on a regular basis, or subscribe to the website’s RSS feed or mailing list.

Help Center: Located outside the physics office (MH2017); physics graduate students are available to answer questions, typically during “business hours”. The schedule will be posted at the center when available.
Grading and Assignments

**Quizzes (15% of grade):** On most Mondays, the class will begin with a 10-minute quiz on the preceding week’s material. Each quiz consists of six multiple-choice questions; partial credit is not available, but the two lowest quiz grades (including missed quizzes) will be dropped. Quizzes are closed-book and closed-notes, and as they are largely conceptual, calculators are not permitted.

**Exams (3×20% each):** There are three one-hour midterm exams during the first hour of Monday classes: tentative dates are September 20th, October 18th, and November 15th. These exams are non-cumulative, and include both conceptual questions and numerical problems. Exams are closed-book and closed-notes, but you are allowed to bring one sheet of $8.5\times11$ or A4 paper on which is written any equations or any other information you wish to have. (Magnifying devices are not permitted!) Partial credit is available on exams. On exam days, the lecture will resume at 6:30pm.

**Final (20%):** A two-hour comprehensive final exam will be held during finals week; you may use two pages of notes, front and back, and a calculator; as with the midterms, no other resources are permitted. Monday, December 13th, at 5pm in the usual class room (MH 2002).

**Lab (5% of grade):** You must be registered for a lab section (PHYS 2140, sections 021 through 039). Performance in lab will constitute 5% of your grade; however, anyone who fails the lab (difficult but not impossible to do) will fail this course automatically. More information will be available during your first lab meeting during the second week of classes. Note that Professor Hill is not involved with the labs and so generally won’t be able to answer procedural questions about it: I will help point you in the right direction, but in most cases, questions about the lab can be best answered by your lab proctor or in the physics office (MH2017). If you think you don’t have to register for the lab for one reason or another, confirm it with me: if you are wrong, things will get ugly.

**Homework (0%):** Homework will be assigned weekly on Tuesdays on the class website; solutions will be posted online the following Monday evening and discussed during class on Wednesdays. Homework will not be collected or graded, but should not be ignored, as it is an essential part of your physics education. For best results, try to complete as much of the homework as possible in time for recitation. If you think you can get by by just reading the homework solutions... well, maybe you can, but why risk it?

Policies

**Academic Honesty:** I expect you to behave honorably while in this class, and to refrain from cheating of any sort. Any student who is caught cheating during exams or quizzes will be referred to the appropriate authorities for sanction; minimum punishment is a zero for the affected work.

**Accessibility:** Any student with a disability who wishes to receive academic and/or classroom accommodations must provide documentation from a diagnosing professional to the Office of Accessibility, located in Room 1820 of Rocket Hall, (419) 530–4981. The documentation provided must reflect a disability that currently and substantially limits academic functioning. The Office of Accessibility will determine what accommodations are appropriate and reasonable based on the documentation provided. For more information, visit [http://www.utoledo.edu/utlc/accessibility](http://www.utoledo.edu/utlc/accessibility). Accommodation on any given exam cannot be given without prior notification to the instructor.

**Class Attendance:** Attendance is not required, because you are an adult and I can’t make you do anything. You are responsible for everything discussed in class, whether you attend or not. It is recommended that you make arrangements with a fellow student, so that either of you can contact the other for notes in case of absence. Announcements made in class will generally be posted on the class website, but if I forget to do so, you are still...
required to know what I said in class. Note that while I am happy to talk with you about what you missed in
general terms, I cannot give entire “makeup” lectures over the phone or during office hours.

**Distractions:** Mobile phones and other noisemakers must be silenced during lecture; violators will be mocked.
If you must take or make a phone call, please retire to the hallway to do so. You may not use a cell phone for any
reason during exams (including as a calculator). If you must eat, play games, or engage in any other behavior
which is mildly distracting to your fellow students or the instructor, please sit in the back of the classroom. The
instructor will ask you to stop or leave if you are too distracting. If you find another student’s behavior to be
distracting, and don’t want to confront her or him yourself, please let the instructor know.

**Grades:** Grades can be accessed through the class website, using the ID number given to you early in the
semester; if you lose your ID number, talk to the instructor.

**Missed Quiz/Exam Policy:** The University permits students to make up work for the following reasons only:
1. personal emergencies (personal illness, illness of a dependent, or death in the family);
2. religious observances that prevent the student from attending class;
3. University-sponsored activities, approved by the appropriate University authority;
4. government-required activities (such as jury duty or military service)
The following conditions must also hold:

- the student contacts the instructor before the class begins, unless this was demonstrably impossible, using
  one of the following mechanisms: written note, email, telephone, or IM. When feasible, it is better to
  use two communication mechanisms, as the student is responsible for failed communications (e.g. wrong
  number, lost email, etc). Note that telling me in person about an absence is not acceptable, as I am
  responsible for over a hundred students and can’t easily keep track of you all.
- the instructor is provided with acceptable documentation (e.g., a note from a doctor in the case of illness,
  a note from a coach in case of an athletic event, a program from a funeral or religious event, etc).

Quizzes missed due to excused absences will simply be excluded from the student’s quiz average; nor will they
count as one of the student’s “dropped” quiz grades. Missed exams may be made up with an oral exam,
scheduled at the convenience of the instructor and student; if only one exam is missed, the student may choose
to forgo the oral exam and have the missed exam be the dropped exam.

**Tardiness:** If you are late for a quiz or an exam, come anyway; accommodations may be made for you by the
instructor, provided you arrive before the end of the exam period. If you expect to have difficulty making it to
class in time for the weekly quizzes, talk to the instructor.

**Online notes:** I will be posting audio recordings of lectures online, as well as copies of the virtual whiteboard
I use in class. This is for the convenience of students who can’t make it to lecture; they are not meant to be a
substitute for regular lecture attendance. In the event of a technical difficulty which prevents the notes from
being posted, you are still responsible for the material covered in that lecture, so have a backup plan.

**Withdrawal:** The deadline to drop this course is September 7th; it will not show up on your transcript in
that case. You may withdraw from this course at any time before October 29th; the class will be listed on your
transcript with a grade of W. Both are done by the student through the Registrar; the instructor cannot drop
or withdraw students (although he would appreciate being notified of the withdrawal). Note that the instructor
is required to give a letter grade to all students registered on October 30th.