

PHY 142 Spring 2017 Syllabus



Class Meetings

The class group will be the same for lecture and recitations and we will meet in the following times and places.

- **Lectures** – Monday, Wednesday, Friday 12:00 PM – 12:53 PM **Earth&Space 069**
- **Recitation** – Tuesday 10:00AM – 11:20 AM **Harriman 112**

Attendance at all class meetings is expected.

Required Materials

The textbook for this course is Giancoli, Physics for Scientists and Engineers, 4th Edition. You should make sure that you get this with access to the Mastering Physics [<http://www.masteringphysics.com/>] homework system which we will be using. The version of the book at the campus book store is a loose leaf version, we chose this one as it is cheaper and so that you do not need to carry the whole book around with you.

The “bookstore” is now essentially online [<https://stonybrooku.amazon.com>]. Instructions on how to use the system are available here [<http://www.stonybrook.edu/commcms/fsa/bookstore/students/index.html>]. If you have trouble finding your textbook material on Solar, just search in Amazon (once you have turned on Stonybrook benefits) for the following ISBN number: 9780321712592. You can confirm by viewing all courses attached to the book that this is what is recommended for PHY 141 and 142.

The book store version should come with Mastering Physics already (make sure to check this carefully if you buy it used!). You may also choose to purchase a hardcover copy of the book either new or used. If you buy a used book without an access code you can purchase access to Mastering Physics separately online. Please refer to the instructions for getting access to Mastering Physics on the course website on Blackboard. Note that you will have the additional choice of purchasing Mastering Physics access with the option of an eBook, or without. Getting the eBook option is yet another way for you to own the text book if you choose not to purchase a new or use hardcover or loose leaf copy.

Course Topics

We will cover Electricity, Magnetism, Electromagnetism and Maxwell's Equations, Waves, Light and Geometric Optics. This is nominally the material from chapter 21 thru chapter 35 of the textbook.

Assessment

The grades for this course will be determined according to the following breakdown

- Midterm 1: 17.5%
- Midterm 2: 17.5%
- Final Exam: 35%
- Homework: 20%
- Recitation Problems: 10%

The distribution of letter grades for the course will be skewed to reflect the fact that this is a challenging course. What this also means is that getting an A in the class will require hard work!

Homework

There will be Mastering Physics problems assigned for homework once or twice a week. You can access the homework system via the link in Blackboard.

Homework sets will be due by either **2 pm** or **midnight** on the date which they are due (due dates are on the course calendar and can also be seen in Mastering Physics). All the homework sets will be listed under the category "Homework" on Mastering Physics. Each question is worth 1 point independent of how difficult they are. Some homework sets are longer than others and therefore will be worth more than others!

As well as the homework sets, sets for practice (basic tutorial style questions), and review will be made available before midterms. The additional question sets will not earn you **any** credit directly, but the practice questions may help you grasp concepts and the review questions will help prepare you for exams. Both practice and review problems will be listed under the category "Practice" on Mastering Physics, but they are not the same difficulty level. The practice problems for each chapter are fairly easy and are a good warmup for the homework problems, while the review problems are more challenging and help prepare you for the exams.

All problem sets will be available roughly 10 days in advance of the due date. It is recommended that you solve a few of the problems after each lecture to reinforce the points learned, rather than waiting till right before the homework is due and trying to work out the answers in a rush. The hope is you will come to recitation having already tried some of the problems and know which ones you want to get help with before they are due.

Lectures

There will be 3 lectures a week. I strongly encourage and enjoy questions and active participation during the lectures and demonstrations. It will really help me (and ultimately you) to tune the lecture according to questions received on the fly. Lecture notes will be posted online each weekend.

Labs

You must enroll in a PHY134 section of your choice. You must take PHY134 simultaneously with PHY142.

Recitations

Recitation sessions will take place every Tuesday (except for the first week of class) at 10AM. The recitation sessions can be used to briefly review the scope of the problems due on Friday, if students have questions. All students are expected to attend and participate in the recitations. In many of the sessions, one or two problems that emphasize concepts will be discussed and students will be expected to work in groups to solve these problems. Towards the end of the session, in most of the recitation sessions, a quiz will be administered consisting of a concept-style question to be completed individually. These quizzes will be graded and counted towards the final grade for the course (10%). These problems are meant to help prepare you for the exams, which carry significant weight in the final grade. I note that these quizzes will not require preparation if you have attended the previous three lectures leading up to the specific recitation section.

Exams

There will be two midterm exams, one in early March and one in early April. There will be a final exam at the time and location assigned by the Registrar's office during the final exam period. All exams are cumulative. You may bring a single letter size sheet of hand written formulas to all exams.

Academic Integrity

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instance of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at

<http://www.stonybrook.edu/uaa/academicjudiciary/> [<http://www.stonybrook.edu/uaa/academicjudiciary/>]

Electronic Communication

Email to your University email account is an important way of communicating with you for this course. For most students the email address is 'firstname.lastname@stonybrook.edu', and the account can be accessed here: <http://www.stonybrook.edu/mycloud> [<http://www.stonybrook.edu/mycloud>]. It is your responsibility to read your email received at this account.

For instructions about how to verify your University email address see this:

<http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo> [<http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo>]. You can set up email forwarding using instructions here: <http://it.stonybrook.edu/help/kb/setting-up-mail-forwarding-in-google-mail> [<http://it.stonybrook.edu/help/kb/setting-up-mail-forwarding-in-google-mail>]. If you choose to forward your University email to another account, we are not responsible for any undeliverable messages.

Religious Observances

See the policy statement regarding religious holidays at

<http://www.stonybrook.edu/registrar/forms/RelHolPol%20081612%20cr.pdf>

[<http://www.stonybrook.edu/registrar/forms/RelHolPol%20081612%20cr.pdf>] Students are expected to notify the course professors by email of their intention to take time out for religious observance. This should be done as soon as possible but definitely before the end of the 'add/drop' period. At that time they can discuss with the instructor(s) how they will be able to make up the work covered.

Disability Support Services (DSS)

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748 or <http://studentaffairs.stonybrook.edu/dss/> [<http://studentaffairs.stonybrook.edu/dss/>]. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, and/or inhibits students' ability to learn.