

SYLLABUS: PHY 2054 - Physics II - FALL 2009

INSTRUCTORS

Professor Pradeep Kumar, Course Coordinator

Professor Guenakh Mitselmakher

Professor Yasumasa Takano

LECTURES

Tuesdays and Thursdays, Period 2 (8:30AM – 9:20AM) or Period 3 (9:35AM – 10:25AM), NPB 1001

REQUIRED MATERIAL

- You will need to purchase the textbook “*College Physics*” by Serway and Vuille, Eighth Edition, Part II. Additional material that the publisher provides with the textbook is optional. Note that you do not need to get Web Assign.
- You will need an HITT remote to answer the lecture quizzes.

AVAILABILITY FOR ASSISTANCE OUT OF CLASS

- Faculty office hours:

Dr. Kumar NPB 2160 on Monday, 5th Period (11:45 AM-12:35 PM) and W10

Dr. Mitselmakher NPB 2021 on Thursdays, 4th and 5th Periods (10:40 AM-12:35 PM).

Dr. Takano NPB 2356 on Tuesday 4th and Thursday 6th Period (12:50 PM-1:45PM).

If you need to see us at other times because of scheduling conflicts please make an appointment, or just take a chance and walk in.

In order to better accommodate your schedules, the TAs have kindly agreed to coordinate their office hours. The office hours have minimal overlap and there is someone available at any time there is need. In other words, [you can go for help to any of the TAs during their posted office hours.](#)

Finally we also hold a Tea and Cookies session on Wednesdays at 5PM in room NPB 2165. One of us will always be there to answer questions.

- Problem solving help

The more practice you get with problem solving, the faster you can solve the exam problems. (Note that with 15 questions in 2 hours you will only have 8 minutes per question during the exams.)

We therefore have made the solutions to all book problems accessible from the class webpage to help you practice problem-solving beyond the minimum assigned homework. The access to the solutions will require a password which will be given in class.

COURSE OBJECTIVES PREREQUISITES AND ASSIGNMENTS

This course is primarily for students majoring in biology and related subjects. The student should have a good working knowledge of algebra and trigonometry, which will be required in order to work problems. The course seeks to provide a reasonable blend of theory (concepts of

physics) and problem-solving techniques based on theory. Problem-solving techniques are emphasized strongly in the recitation classes. The lectures are primarily concerned with developing the concepts of physics and working through a few problems involving application of these concepts.

Physics, like most subjects in science, is best learned by "doing" it; that is, by using intuition and the principles touched on in class to solve problems. The ability to do this is developed only by practice, and the homework and quizzes are designed with this in mind. As a general rule, cramming for exams and memorization of formulae turn out to be less useful for physics courses than for subjects like anatomy or physiology, because the few relevant physical principles involved can be applied to an almost infinite variety of situations. It is recommended that you keep up with the class on a steady basis and see us if there are things that you do not understand.

Memorization by itself is not significantly important. Hence you will be allowed to bring to each exam one 8-½ inch by 11-inch sheet of paper with anything on it. An electronic calculator, pencils, scrap paper and a picture ID are needed for the exams. It is your responsibility to bring these items.

SCHEDULE OF CLASSES AND ASSIGNED READING

The schedule of the classes and exams is available from the class webpage.

We will try to adhere to this schedule as best we can. Any changes will be announced in class.

EXPECTATIONS FOR PERFORMANCE IN CLASS

You will be expected to have read assigned textbook material before coming to class. You will get much more out of the class that way and the lecturer can spend more time on applications.

For a good grade in this class it is imperative that you get plenty of practice in problem solving. We have posted a set of homework problems which we consider an absolute minimum. At least 6 hours a week of problem solving is recommended for a passing performance. In order to allow you to get more practice we are posting the solutions of all the book problems on the class webpage.

LECTURE QUIZZES

There will typically be 2 clicker-quizzes every lecture. The purpose of these quizzes is to train you in more conceptual problems. This will be especially useful for those of you who plan to take pre-professional exams such as the MCAT.

For a correct answer you will get 5 points, for an incorrect answer you will still get 2 points. If no answer is recorded you will get 0 points.

We realize that you may miss class because of illness or other compelling reasons, or that your clicker may malfunction, or some other unfortunate circumstances. No credit will be given for lecture quizzes if you forget your clicker or it malfunctions. It is your responsibility to ensure that the battery is not dead and the clicker is kept away from your cell phone, which can cause the clicker to freeze up.

To allow for all such situations we will drop the lowest 20% of all lecture quiz grades in the computation of the total quiz grade.

HOMEWORK

Solving HW problems is the best way to prepare for the exams. The list of suggested homework problems from every chapter is available from the class webpage.

The assignment of specific homework problems from this list and the due date will be fixed by the individual TAs during the discussion classes.

The HW problems (the more difficult ones) are similar to the problems you should expect at the exams. The HW grading (5% of your total grade) will be done by your TA. It will be based on the effort, rather than on the result, which means that your HW grade will not be reduced even if you are not able to solve all the problems, as long as you try (hard) and return your HW on time (the schedule to be determined by the TAs.).

It is much better to make an honest and serious effort to solve a problem than to copy a solution. In case you have difficulties solving a problem please consult with your TA or with us.

EXAMS AND GRADING POLICY

There will be 2 partial exams with 15 questions each during the semester and a 15 question final. Makeup exams will be given only under the most unusual circumstances.

Composition of Course Grade:

The 2 partial exams each count 25%, with a total of 50% ;

Comprehensive Final: 25%

Lecture quiz grade: 5%

Discussion Grade given by TA: 20% (5% for assigned homework, 15% for discussion section quizzes) ;

The final letter grades will be assigned on an absolute scale as follows:

A 85% or better

A- 79%

B+ 72%

B 65%

B- 59%

C+ 52%

C 45%

C- 40%

D+ 35%

D 30%

D_ 25%

E less than 25%

The reason for choosing an ABSOLUTE scale is that this way you do not compete against other students, but it is your performance alone that determines your grade.

It is our goal that at least half of the enrolled class will get a grade of B or better and 15 % or more will get an A. By how much you collectively exceed that goal will depend on you.

Example of Grade Computation

This shows you the importance of the 'easy' points, i.e. discussion section quizzes, homework, class quizzes. If you fail to take advantage of them, your final class grade can be lower by a whole letter.

You may also consult this site to estimate your expected class grade as the semester progresses.

ANNOUNCEMENTS

Any changes to the syllabus will be announced in class and, for your convenience, will appear on the class webpage. It is your responsibility to keep informed.

WE HAVE ZERO TOLERANCE FOR CHEATING

Whether on exams, discussion quizzes or class quizzes. to help someone else deliberately, or even inadvertently is considered cheating (see University policies). Because cheating is so unfair to everyone else, you are encouraged to report to us any instances of cheating that you witness.

MISCELLANEOUS UNIVERSITY POLICIES:

- Students with disabilities requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. <http://www.dso.ufl.edu/drc/>. You will then need to see Prof. Kumar.
- The University's honesty policy regarding cheating and the use of copyrighted materials applies and can be found at <http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php>
- Counseling and mental health services: please consult the University of Florida Website. <http://shcc.ufl.edu/smhs/> and <http://www.shcc.ufl.edu/smhs/>