
Physics 218 is the first semester of an introductory course in Physics, one of the foundations of modern science and technology. This class will teach you basic skills needed in all fields of science and engineering. This includes problem solving strategies, analytic thinking, and the ability to contribute in a scientific discussion. Course material includes the physics of motion, Newtonian mechanics applied to statics and dynamics, and waves.

Instructor: Dr. Joseph Ross
Office: 448 Mitchell Physics building (MPHY 4th floor) or lab: B03 Engineering Physics (ENPH)
Phone: 845-7823 (lab only—email is preferred way to contact me)
E-mail: jhross (at) tamu.edu
Office hours: M 4-6, T 3:30-5, R 3-4, in MPHY 448. Other times as available, always good to email first.

Web Pages: The main course web-page, rossgroup.tamu.edu/218page.html, has links to the other required sites, and will be updated with general information as the course proceeds. Lecture slides and grades will be posted on ecampus.tamu.edu, which also has the MasteringPhysics homework submission link. Other sites: www.smartphysics.com for pre-lectures, webassign.net for labs.

Co-Requisite: MATH 151 or 171. You must have a working knowledge of plane geometry, trigonometry, and algebra. As the semester progresses you will also be expected to have a working knowledge of derivatives and integrals, and be proficient in the use of vectors (addition, subtraction, dot and cross products).

Class times: Lectures TR 5:30-6:45, in MPHY 203, plus one Recitation/Lab section (on M, T, or W).

Text and required materials: The text is "University Physics", 13th ed., Young and Freedman, vol. 1, stocked in the bookstore, or see the web-page for other versions that would suffice. Look for bundled MasteringPhysics access, or you must purchase access to this site separately. Also you will need to purchase an access code for WebAssign for the labs and SmartPhysics for the prelectures. Finally, you must have an "iClicker" for the lectures. More details about these requirements, with registration instructions, are on the main course web-page. You also should have a pocket calculator capable of calculating arithmetic and trigonometric functions for exams.

Pre-Lectures: This year the PHYS 218 lectures are going toward a “flipped course” model, and as part of that we are using a pre-lecture system hosted on the online SmartPhysics site. You are required to view the pre-lectures (narrated videos including a few online questions) ahead of the lectures, and the lectures will include quizzes to see if you have gained a basic understanding. The remainder of the lecture can then focus more on problem-solving. The SmartPhysics site also includes “Checkpoints” following most pre-lectures, short quizzes to test for understanding. To register, go to SmartPhysics.com, and use the Course Access Key, SPRossS14.

Lectures and Clickers: iClickers will be used for in-class conceptual testing and polling. Together with the Pre-lectures, 7% of the course grade is based on these parts. To encourage class participation, credit for iClickers will be based in part on participation (full participation points requires attending more than 90% of the lectures—you get 3 “free drops”) as well as additional points based on correct answers. To gain participation credit you must pre-register your device, and answer all of the questions in class. Cheating by bringing a friend’s clicker is a violation of the Aggie Honor Code, and will result in loss of all clicker points, and possible disciplinary action. To register the iClicker, go to http://www.iclicker.com/support/registeryourclicker/, and enter your first and last names (same as on your TAMU ID), then the TAMU UIN, then the ”Remote ID” code from the back of your iClicker. (It can also be found on the LCD screen upon powering up the remote.) Technical problems with the clickers will likely need to be addressed to the support people at iclicker.com.

Laboratory: The Lab is a part of this course, not treated as a separate grade. The Lab Schedule is on a separate page, and posted on the course web-page. The lab write-ups, along with pre-labs, will be obtained this year though the online WebAssign package—the instructions for this are not quite ready but will be posted soon. Note that although we have Recitation each week, we do not have Labs each week; see the Lab Schedule for details. In case you are repeating the course, you might be able to use your old lab grade, but only from Fall 2013 if the score is above a required minimum. The policy for absences in Lab and Recitation is the same as for the Exams, and you must consult first with your TA in the case that you have an excused absence.

Homework and Recitation: Homework assignments are posted online on the Pearson Mastering website, and you are responsible for completing and understanding these problems in preparation for Recitation, which will include a quiz on the homework, in most weeks, starting in the second week. (Recitation quiz applies to the regular online HW, not the extra “Adaptive Followup.”) By the end of the first week you should set up your Mastering
account. The required code comes with your textbook (if you have a used textbook you may have to purchase the website access separately). Instructions for registering on the homework site are given on the main course web-page; to do so you follow the link in eCampus.tamu.edu.

You must work the online homework problems on your own, and keep up with the deadlines--see the Mastering site for posted due dates as the course proceeds. Assignments are generally due by 11:59 PM on specified days, although note that this is a soft deadline; you lose 5% credit per hour after that time, dropping to 30% of the credit which you can still claim if you work the problems later. There are also "Adaptive Followup" extra credit assignments due 2 days after the regular assignment, with a hard deadline for those, no late submission allowed. If you do very well on the regular assignment you may get full credit for the extra assignment without extra work. More details about the grading policy for individual homework problems can be found on the online site—for example in some cases you get several attempts to key in the correct answer, with a 3% penalty for wrong attempts.

Exams: We will have 3 common evening exams and one final exam, with the schedule for these listed on the separate Class Schedule page. The common exams are the extra evening sessions included in the course schedule when you registered. These exams start at 7:15 PM, and are expected to last 1.5 hours. The location will be announced in class. The Final exam is Weds, May 7 at 3:30 PM, the regular time assigned for our class. There should be no conflicts at this time since the schedules are set up by the Registrar, however if you have 3 exams on one day you can get one rescheduled—for such requests you need to see me well in advance, since last minute arrangements may not be possible. Exams generally consist of problems similar in content and difficulty to the homework, and they are expected to include both multiple-choice and free response questions. Numerical exam grades will likely be curved, with the curve announced in class. Formula sheets will be provided for each exam.

Absences: If you miss an exam due to an authorized excused absence as outlined in the University Regulations, you should attempt to contact me prior to the exam, but no later than the next class meeting following the missed exam to arrange for a makeup exam, or in some cases the missed exam score may be replaced by an average of the other two exams. Note: Few conditions qualify as an authorized excused absence, so you must avoid missing exams except for extremely serious circumstances. Identification: You must bring your TAMU student ID with you to all exams for identification purposes.

Course Grade: The overall course grade is weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Exams (course-wide evening exams)</td>
<td>39%</td>
</tr>
<tr>
<td>Final Exam (individual for this lecture)</td>
<td>26%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>9%</td>
</tr>
<tr>
<td>Recitation Quizzes</td>
<td>8%</td>
</tr>
<tr>
<td>Online homework</td>
<td>11%</td>
</tr>
<tr>
<td>Prelectures and in-class (clickers)</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

* ALTERNATIVE: If your final exam grade is higher than your 3-exam average, the final will count 38% and the midterm exam average will be scaled to 27% (9% each).

ADA Policy: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.