Physics 2210 Anthony Pantziris
Summer 2012

Physics for Scientists and Engineers I

Instructor:	Anthony Pantziris, 218 INSCC, 585-7653, app@physics.utah.edu
Office Hours:	9:30-10:30 a.m. M W F
Course Coordinator	Mary Ann Woolf, 205 JFB, 581-4246 (also fax #); woolf@physics.utah.edu
Textbook	*Physics for Scientists and Engineers (with Modern Physics): A Strategic Approach*, 2nd edition by Knight.
Prerequisites:	MATH 1210 Calculus I
Course Web Site:	http://www.physics.utah.edu/~woolf/2210_tony.html
WebAssign:	https://www.webassign.net/utah/login.html
Teaching Assistants:	Jon Paul Lundquist, Michael Newbold, Peter Peroncik, and Rob Roundy (Marshal & WebAssign)
Class:	M W F, 11:00 a.m. - 12:15 p.m, WEB L104

Course Objectives

Many of you are in programs in engineering and other disciplines. You may question whether physics will ever be helpful to you. The answer to this question is "yes!" The course will help you to understand and solve problems in a broad range of disciplines. The primary subject of this course is Mechanics. Mechanics includes motion in multiple dimensions, force and the laws of motion, energy, momentum, rotational motion, gravitation and oscillation. Elements of this subject material are found in all parts of nature.

The three most important goals of this course are to: (1) learn some fundamental principles of physics (force laws, conservation laws, etc); (2) learn to describe real world phenomena quantitatively (kinematics, etc) (3) learn problem-solving skills that can be applied to other areas of science, engineering and life. The achievement of these goals will require a conceptual understanding of the physical principles, an ability to use equations to describe particular phenomena and a methodical approach to problem solving.

Textbook

Physics for Scientists and Engineers (with Modern Physics): A Strategic Approach, 2nd edition by Knight. Homework will be from the book but handled through WebAssign. The actual assignments are accessed individually by each student when they enter the WebAssign website, https://www.webassign.net/utah/login.html., at a cost of $22.95 for the semester. Students are responsible for their own WebAssign access on-line. Payment can be made with credit card purchase or using a checking account that is linked to a Paypal account. This is explained when you first log into WebAssign.

Homework

For this course we use a web-based homework assignment provided by WebAssign. To log-on to WebAssign, you use your same log-in and password that you use for the Campus Information System (CSI). You will complete all homework assignments over the web and get immediate feedback (grading). For most problems, you will be given up to five opportunities to enter the correct answer. This means that you will only be entering answers to the homework. There is a great danger in this. In contrast, on examinations, you will be required to present full solutions (showing all work) and will only have 1 try. Hence, it is strongly recommend that you work out all homework problems on a clean sheet of paper (even though you will not turn these in) and compare these to the solutions provided by the TAs, which will be available after the problem set due date through WebAssign. I highly recommend that you use the suggested Problem Solving Strategy and Tactics section in each chapter of the text. It may seem that it will take more time, but experience shows that using a systematic method will save hours of hunting for a careless error.

All homework should be completed on Tuesday and Thursday nights. The precise due time is 10:00 a.m. on the following Wednesday or Friday morning. Each problem in the assignment is worth 2 points, whether the problem has 1 part or 7 parts. (You will notice, for example, that WebAssign will make a five-part problem worth 0.4 points per part.) At the end of the term, your five (5) lowest homework scores will be automatically dropped. No re-grades will be allowed, and NO LATE HOMEWORK WILL BE ACCEPTED.

WebAssign also provides an on-line forum for homework. You may use this to discuss problems with fellow students. The forum will also be regularly monitored by the TAs at times to be determined. You are encouraged to participate actively in the forums, to seek help and to offer advice to your classmates on how to approach problems. However, the forum may not to be used to post explicit problem solutions in any form. Such postings will be removed by myself or the TAs.

Midterms and Final Exam

For detailed rules please refer to the exam procedures document through the course web page. There are four (4) midterm exams and a final exam. YOU MUST TAKE THE FINAL EXAM TO PASS THIS COURSE. All exams are closed book. You may not bring any materials to the exams but a single 3" $\times$ 5" card, with helpful equations and relationships on it, and a calculator. Having a 3" $\times$ 5" card is a good idea for several reasons. First it will help you to study and focus on the most important relationships. Second, you will not have to memorize all the formulas. Thirdly, it will allow you to quickly find the equations of interest during the exam. Do not believe that you can do well on the tests without understanding the material, however. The tests will not be easy. The final exam is comprehensive.

Normal scientific and graphing calculators are allowed during exams. We do not allow laptop PCs , palm pilots or other devices with significant text (alphanumeric) storage capability, or those with wireless communications devices. If there is any doubt as to whether an item is allowed, ask your TA. The TA's decision is final.

Midterm Exam Schedule

Midterm 1:	Friday, June 1	11:00 a.m.-12:15 p.m.	WEB L104, WEB L103
Midterm 2:	Friday, June 15	11:00 a.m.-12:15 p.m.	WEB L104, WEB L103
Midterm 3:	Friday, July 6	11:00 a.m.-12:15 p.m.	WEB L104, WEB L103
Midterm 4:	Friday, July 20	11:00 a.m.-12:15 p.m.	WEB L104, WEB L103
Final Exam:	Friday, August 3	10:00 a.m. - 12:00 p.m.	TBA

Midterm exams last 75 minutes. Please arrive 10-15 minutes early on exam days so that we may get you seated, get the exams distributed, and allow you the full 75 minutes to complete the exam. If there is a scheduling conflict that can be resolved by taking the exam at another time, this can be arranged, but you must notify Prof. Pantziris by email in advance. Legitimate academic conflicts will be recognized and accommodations made.

There will be no make-up tests or exams. The only exceptions to this rule are (a) absence due to a University sponsored activity or to military duty, and (b) serious medical emergencies. In either case the student must provide complete documentation. All requests for exam accommodations are handled exclusively by Professor Pantziris; do not address such requests to anyone else, as they will not be honored. In the case of exception (a) the request for a make-up exam must be filed with Professor Pantziris at least one week in advance of the anticipated absence. Please note that all exam dates and times have already been determined; mark your calendars now! Resolve any conflicts as soon as possible.

Determination of Course Grade

The grade for the course will be based on homework, midterm and final exam scores. The homework counts 25%, the midterms 50%, and the final 25%. The lowest five (5) homework scores will automatically be dropped. The lowest midterm score will be automatically dropped. The course is graded on a standard curve: the median score will be in the C+/B- range. Roughly speaking, the third of the class that is just higher than the median, is looking at some form of B. The third just lower is looking at some form of C. The extremes in the curve get A's and D/E's. Natural breaks in the scores will be used to determine the actual lines between grades. Depending on these breaks, about 15% of the class will get some form of A.

Near mid semester, I will provide a formula to you to estimate your grade based on homework and exams completed up to that point. Please note that these are only estimates, and that your final grade may change significantly, particularly since the final exam is worth 25% of your final grade.

Any request for re-grading of a problem on an exam must be made before the following exam. You must fill out a re-grade form (found on the web site) and attach it to the entire problem (not just one part) to be re-graded. (Do NOT submit problems that you are not asking to be re-graded.). You must use a separate re-grading form for each problem. These sheets should be given to Professor Pantziris in class before the next midterm exam. In the case of Midterm #4 (last midterm), you must submit a request for re-grading before the end of the last course lecture on August 3. Problems will NOT be re-graded after the next exam occurs. Exams MUST be done in black or blue pen

(NOT red), in order to be eligible for a re-grade. No exam done in pencil will be re-graded. When you submit a request for the re-grading of a problem, the entire problem will be re-graded, not just the parts that you are disputing. It is usually the case that you will not lose points by submitting a re-grade, but this is not guaranteed. Submitted problems for re-grade will be evaluated and returned with the following exam.

You are allowed to ask for re grades on the final exam. This request will only be considered in the case that you are near a course grade boundary, and there are some additional special rules. The request must be made by 5 p.m. on August 10, 2012. You must turn in a re-grade form for each problem, just as with the midterms. However, you must turn in the entire final exam for a re-grade. The entire exam will be re graded (not just the problems you submit for a re grade).

Deadline for submitting re-grades:

By next exam - Midterms 1-3
August 1 - Midterm 4
Deadline for notification of recording errors, clerical errors, or arithmetic errors on any midterms or homework. – August 3, 2012 (Final Exam) – unless you point out any scoring or recording error by this date, the scores as recorded will stand.
August 3, 2012 -Final Exam
August 7, 2012 – Graded Final Exams available from Mary Ann Woolf in JFB 205
August 10, 2012 – Deadline for all requests for re-grades on Final Exam

Honesty

Cheating of any kind on an exam is a very serious violation of University rules and is unethical. Students caught cheating will receive a failing grade for the course and will be sent on to the University Disciplinary Committee for further action. All teaching assistants, including the course marshal, and the administrative assistant for the course are to be considered proxies for Professor Pantziris when you are dealing with them regarding this course. They are to be listened to and treated with respect at all times.

Important Dates

Last day to drop (delete) classes with no tuition penalty is Wednesday, May 23
Last day to add without a permission code is Sunday, May 20
Last day to add classes is Tuesday, May 29.
Last day to elect CR/NC options is Tuesday, May 29.
Last day to withdraw from term length classes is Friday, June 22.
NOTE: It is now university policy that your courses will be irrevocably DROPPED if tuition is not paid on time!

Holidays
Monday, May 28, Memorial Day
Wednesday, July 4, Independence Day
Tuesday, July 24, Pioneer Day

Students with Disabilities

The University of Utah and the Department of Physics seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this course, reasonable prior notice must be given to the instructor and to the Center for Disability Services, 162 Olpin Union Bldg, 581-5020 (V/TDD) to make arrangements for accommodations. You are strongly encouraged to come and talk to the instructor about your disability and necessary accommodations within the first two weeks of the semester.