Introductory Studio Physics for Engineers I Course Syllabus

Course: PHYS 1251; Spring 14

Prerequisite or Co-requisite: MATH 2250

Instructor: Mark Worthy

Office: 252A Physics Building; phone: 706-542-3909, E-mail: mworthy@uga.edu

Office Hours: Mon-Thurs 2:30-3:30PM. You may also make an appointment. In most cases if I’m in my office you may come in for help.

Topics: Welcome to PHYS1251. This is the first semester of a two-semester sequence of physics. In this course we will spend most of the semester investigating the topics of mechanics. Mechanics' topics include velocity, acceleration, force, work, energy, momentum, and torque.

Rough Schedule:
Jan 7-16: Displacement, Velocity, and Acceleration (Kinematics)
Jan 21-23: Vector Mathematics
Jan 28-30: Projectile Motion
Feb 6-18: Newton’s Laws and Applications, and Friction
Feb 18-20: Circular Motion
Feb 25-27: Gravitation and Kepler’s Laws
Mar 25-Apr 1: Momentum, Impulse, and the Conservation of Momentum
Apr 8-15: Rotational Dynamics, Energy, and Inertia
Apr 17-22: Torque and Static Equilibrium (“Statics”)
Apr 22-24: Conservation of Angular Momentum

Course Style: For the most part this will not be a standard lecture-type course. You will be learning physics by modeling, analyzing, trying to work problems yourself, and experimentation. If you’ve never taken a class like this before then it may take weeks before you become comfortable with this style of learning. Until then, try to keep an open mind. You will be expected to view some on-line lecture material before class in your preparation for class. You will be part of a group. The groups will change at least once during the semester.


Note: “Scientific Calculator” means a simple, scientific calculator. This means non-programmable, non-graphing, and non-symbolic. The use of graphing, algebra-solving, or programming functions will not be permitted for any exam, nor will cellphones, laptops, etc. (if the calculator isn’t allowed on the SAT, then it’s not allowed for our exams).

Test Schedule: **February 4**th (Chapters 1-3), **March 4**th (Chapters 4, 5, & 11), **April 3**rd ( Chapters 6-8), & the **FINAL EXAM is May 1**st (Thursday 12-3PM). This cumulative exam includes material from chapters 9, 10, & 12.

Grades: A = 93 and higher, A- = 90-92, B+ = 87-89, B = 83-86, B- = 80-82, C+ = 77-79, C = 73-76, C- = 70-72, D = 60-69, F = 0-59

Grades Posted: Your grades and some homework solutions will be posted on eLC New. [https://uga.view.usg.edu/](https://uga.view.usg.edu/)

Grade Dist.: Final Exam 25%  
3 Tests 45%  
Lab Grade 10%  
HW Grade 10%  
In-Class Participation 5%  
Pre-Class Participation 5%

Homework: LON-CAPA: [https://spock.physast.uga.edu/](https://spock.physast.uga.edu/)  
Expect at least one homework assignment to be due on LON-CAPA every two weeks (one per week most weeks). The test problems will be similar to homework problems. It’s extremely rare that a student passes a physics course without doing the homework problems several times.

Attendance: With this style of course **attendance is required**. You will be part of a group. If you are absent then they will be relying on you to be caught up when you return to class. If your schedule is going to make it difficult for you to attend regularly then you shouldn’t take this course. The Physics Department is offering traditional lecture courses that you could take instead.

For tests, if you are absent **no makeup tests will be given**. If you have an excused absence then your final exam grade will be used to replace the grade you missed for at most one test. For a missed test you must inform me of your excuse within one week of your return to class or else the absence will not be excused. More than one excused absence on tests will be handled at my discretion. No credit will be given for unexcused absences. If you are late for a test your best option is still to come to class (late, get there ASAP); you might not receive extra time to finish it. Waiting until after class to come by or email me (when you could have showed up late) will probably mean a zero on the test.
Labs: On approximately half of our Thursdays this semester we will spend most of our double-period performing an experiment. For most of those labs you will fill out a worksheet during the experiment and turn it in at the end of the (second) period. There are no makeup labs (a missed lab will receive a grade of zero). However, your lowest lab grade will be dropped.

Drop Dates: You have until the end of day on January 10th to drop the course and until March 20th to withdraw from the course (there is a fee for withdrawing).

Cell Phones: All cell phones must be turned off (when you are in the lecture room).

Tips: In physics, coming to class and doing the homework does not necessarily mean that you will make at least a C. The more times you rework the homework the greater your chance of earning at least a C in this class. This takes many hours. Most of you will need to devote at least two hours to studying/homework for every one hour in class. It’s not going to be enough to simply watch me (or someone) do physics; you must do the homework problems and answer the questions yourself. When you first read a problem make sure that you can identify every variable in the problem before you start working (list them on your page).

Tutors are available either for free through the UGA Tutoring Program at Milledge Hall (http://tutor.uga.edu/), or for pay through the Physics Department at http://www.physast.uga.edu/tutors .

Academic Honesty: The University of Georgia has a comprehensive policy on academic honesty, described in a document entitled A Culture of Honesty. This document is available through the Office of the Vice President for Instruction or online at http://www.uga.edu/honesty/ . This policy covers all academic work.

As a UGA student, you are responsible for knowing and understanding this policy. If you have any questions about what is or is not allowed please ask me. Claiming that you “didn’t know” your actions were not allowed or that another professor allowed you to do one of these actions is not an acceptable excuse for your actions.