PHYS 1211  
Principles of Physics for Scientists and Engineers:  
Mechanics and Waves (and Thermodynamics)  
Spring 2021  
Instructor: Phillip Stancil  
TR 9:35 am-10:50 am, Physics 202  
Prerequisite: MATH 2250, 2250E, 2300H, or 2400/H  

Pandemic Information: Since we can fit everyone in room 202 with social distancing, all lectures, tests, and the final exam will be given in person. The lecture will be zoomed synchronously. Zoom link to be provided.

Instructor Information  
• Office: Room 206, Physics Bldg.  
• Phone: 706-542-2485  
• Fax: 706-542-2492  
• Email: pstancil@uga.edu  
• Website: www.physast.uga.edu/people/phillip_stancil

Times and Locations  
• Lectures: T(Tu)R(Th), Period 2 (9:35 - 10:50am), Room 202, Physics Bldg.  
• Office hours: TBD  
• Laboratory: Various times, Room 314, Physics Bldg.

Introduction  
This course is the first semester of introductory university physics which covers mechanics, wave properties, and some thermodynamics. The focus is on classical physics. Multivariable calculus will be used throughout and some familiarity with general chemistry will be helpful.

Course Goals and Learning Outcomes  
• To develop physics expertise in mechanics, waves, and thermodynamics,  
• To apply advanced mathematics to describe the physical world,  
• To expand our physics language ability, both written and verbal,  
• To enhance our problem solving abilities,  
• To keep up with current developments in physics and astronomy, and  
• To grow as scientists and/or engineers.
Required Course Materials

• *Physics for Scientists and Engineers*, 4th ed., Randall D. Knight, Pearson, 2017 (MasteringPhysics will not be used).


• A simple scientific calculator, which must be non-programmable, non-graphing, and non-symbolic for tests/exams. The use of a calculator with graphing, algebra-solving, or programming functions will not be permitted for any test or exam, nor are PDAs, tablets, cell phones, Apple watches, or other electronic devices to be used.

Required Resources

• Course Website: http://www.physast.uga.edu/classes/phys1211/stancil/.

• *Learning Online Network with CAPA (LON-CAPA)*: http://spock.physast.uga.edu/. Online homework system. See Homework section for more information.

Optional Resources

• *The Student Workbook*, R. D Knight, Pearson

• Other University Physics textbooks

Grading Policy

Your final score will be determined from your overall performance in the class including tests, final exam, online homework, in-class problems, and laboratory grade with the following weights:

• 40% Two (out of three) in-class tests (20% each), lowest test score dropped

• 30% Final exam score

• 10% LON-CAPA online homework

• 5% In-class problems

• 15% Overall laboratory score

Final letter grades will be based on the class statistical distribution of total composite scores with the mean score corresponding to a middle-C. However, the lower range of the grade distributions will be no higher than 95.00 A, 90.00 A-, 86.67 B+, 83.33 B, 80.00 B-, 76.67 C+, 73.33 C, 70.00 C-, and 60.00 D.

Test and Exam Policy

There will be three in-class tests and one final exam. All tests and exams are closed book and closed notes. You can only bring pencil and calculator to the tests and exam. Calculators must be non-programmable, i.e. no formulae can be stored. Equation sheets will be provided. The tests and exam will consist of primarily problems with some true/false and/or multiple-choice questions. Further details about each test and the exam will be given in class.

The test make-up policy is as follows: 1) There will be NO make-up tests given. 2) If you miss one test, your test average will be based on the other two tests only (i.e., the missed test will count as your dropped
test score). 3) If you miss a second test or the final exam, **regardless of the excuse**, the maximum grade you can receive in the course is an Incomplete. 4) A missed final exam can only be made-up under extreme circumstances. In order to be eligible for a make-up final exam you must have a documented excuse for missing the exam (e.g., doctor’s note for a serious illness) and you must contact me (via telephone or email) before the final exam. 5) If you have a scheduling conflict with the final exam, you must inform me at least two weeks before the exam date, so arrangements can be made. The anticipated test/exam schedule is attached, though it may be possible that the dates of the in-class tests can change. Announcements of the fact will be made in class. “I did not know we had a test today” is an unacceptable excuse.

**Homework Policy**

Homework assignments will consist of two parts. The first part will be done online for a grade with the Learning Online Network with a Computer Assisted Personalized Approach (LON-CAPA) system. More details about using LON-CAPA will be given in class and on the course website. The second part of the homework will be the End of Chapter (EOC) problems from Knight, 4th ed., but which will NOT be collected for grading. Assignments will generally be made by Thursday of each week with the LON-CAPA portion due by the following Wednesday night, while the EOC problem solutions will be posted on the class website. While you receive no grade for the EOC portion of the homework, it is one of the most important things you can do in this course to learn physics. Concepts you learn from the online problems are applied to more complex, and often, practical problems in the EOC portion. I suggest you do all of the assigned problems as carefully as you can. It is highly likely that one or more online or EOC problem will appear, in some form, on a test and/or the final exam. You are encouraged to work with your fellow classmates on the EOC portion of the homework assignments, but the LON-CAPA part must be your own work. You are also encouraged to work additional problems - as many as possible!

**In-class Problems**

This semester the course is evolving to incorporate more active learning methodologies (also called SCALE-Up). While most of the lecture structure will remain, you will spend some class time each week working on problems. The in-class assignments will be turned in at the end of the class, but I will accept them in my mailbox or via email until 5pm of the assignment day. This is for a grade.

**Bonus Points**

Throughout the semester, pop quizzes will be given in class (roughly every other week). Each quiz will consist of one multiple-choice or true-false question. The average of all quizzes is worth a maximum of 2 points. Further, during most class periods, I’ll randomly call on some students to work an example problem or other task. If the student is in attendance (or on zoom) and assists, they will receive 1 bonus point. The maximum number of bonus points for the course is 3. You can receive 1 bonus point just for taking all quizzes, even if all your answers were incorrect. The purpose of the bonuses is to reward those who keep up with the lecture material and homework assignments. For example, if the lowest total course score for a B− turned-out to be 80.00 while your average was 78.50, you will receive a B− if your bonus average is 1.50 or higher. Otherwise, if you failed to take the quizzes or your bonus average was 1.49 or lower, you will receive a C+. Therefore, unless there is a numerical error in your scores, there will be no basis to discuss a letter grade adjustment. I do not “round up”.

**Student Responsibilities**

1. You are responsible for all material (a) given in the homework problems, (b) discussed in class, (c) in the assigned reading, and (d) in the lab exercises.
2. You are responsible for all announcements made in class, whether you are present or not, and on the class website.

3. Read the assigned portions of the textbook before class.

4. Do all homework assignments.

5. Attend ALL laboratory sessions in your assigned laboratory section.

6. Know the University’s policies concerning withdrawals and incompletes.

7. Ask me if you do not understand anything. There is no dumb question.


Academic Honesty

Be aware of the University’s policy on academic honesty. See http://honesty.uga.edu. Anyone caught cheating on a test or exam will receive a failing grade for the course. Anyone found to be cheating on labs, LON-CAPA assignments, or quizzes will receive a zero for that assignment. A second incident will result in failure of the course. All suspected incidents of cheating will be reported to the Office of the Vice President for Instruction. A session before the Academic Honesty panel is not pleasant. So, let’s not meet there.

Coronavirus Information for Students

Face Coverings:
As a reminder, the University of Georgia – along with all University System of Georgia (USG) institutions – requires all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at https://drc.uga.edu/.

DawgCheck:
Please perform a quick symptom check each weekday on DawgCheck – on the UGA app or website – whether you feel sick or not. It will help health providers monitor the health situation on campus: https://dawgcheck.uga.edu/

What do I do if I have symptoms?
Students showing symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 am - 5 pm). Please DO NOT walk-in. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies.

What do I do if I test positive?
Any student with a positive COVID-19 test is required to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.

What do I do if I am notified that I have been exposed?
Revised Guidelines for COVID-19 Quarantine Period Effective Jan. 4, 2021, students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for 10 days (consistent with updated Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines). Those quarantining for 10 days must have been symptom-free throughout the monitoring period. Please correspond with your instructor via email, with a cc: to Student Care & Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined.

We strongly encourage students to voluntarily take a COVID-19 test within 48 hours of the end of the 10-day quarantine period (test to be administered between days 8 and 10). Students may obtain these tests
by calling 706-542-1162 (Monday-Friday, 8 am - 5 pm). Please DO NOT walk-in the University Health Center without an appointment. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies

If the test is negative, the individual may return to campus, but MUST continue to closely monitor for any new COVID-19 symptoms through 14 days. DawgCheck is the best method for monitoring these symptoms. If new symptoms occur, the individual must not come to campus and must seek further testing/evaluation.

If the test is positive at the end of the 10-day period, the individual must begin a 10-day isolation period from the date of the test.

**How do I participate in surveillance testing if I have NO symptoms?**

We strongly encourage you to take advantage of the expanded surveillance testing that is being offered from January 4 - 22: up to 1,500 free tests per day at Legion Field and pop-up locations. Testing at Legion Field can be scheduled at https://clia.vetview.vet.uga.edu/. Walk-up appointments can usually be accommodated at Legion Field, and pop-up saliva testing does not require pre-registration. For planning purposes, precise sites and schedules for the pop-up clinics are published on the UHC’s website and its social media as they are secured: https://www.uhs.uga.edu/healthtopics/covid-surveillance-testing
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