

PHYS 1211 Syllabus

Introductory Physics for Scientists and Engineers I

Spring 2022

Pandemic Information: While room 221 can hold up to 60 students and over 40 students have registered for this course, I strongly urge you to wear a facemask while in the classroom and Physics Building.

Instructor Information:

- Dr. Qun Zhao
- Office: Coverdell Center, 119C
- Email: qunzhao@uga.edu

Course Description

This is an introductory physics course, with its focusing on Mechanics, the study of motion. You will learn about fundamental concepts of motion such as velocity, acceleration, force, momentum, and energy. We will also examine natural laws including Newton's laws and conservation principles. Most importantly, we will develop a "toolbox" of techniques for solving problems involving motion.

Physics is a quantitative science. You will be asked to communicate your understanding of the material in many ways – mathematically, graphically, visually. You are expected to have a working knowledge of college algebra, trigonometry, basic geometry, and differential calculus (a co-requisite to this course). Please let me know if you are concerned about your preparation for this course.

This course requires a laboratory component, PHYS 1211L, that will account for a portion of your grade (you sign up for the laboratory section separately). No course grade will be assigned until the laboratory requirement is completed. See the lab syllabus for more information:
<http://www.physast.uga.edu/courses>.

Basic Class Information

- TR 9:35-10:50 (Period 2), Room 221
- Lab: 314 Physics Building or 116 Science Learning Center (Various times)
- Final Exam: Mass Final Exam: May 9, 7:00-10:00pm
- Office Hours: TR 11:15-12:15, Coverdell Center room N339

Required Course Materials

- *Physics for Scientists and Engineers: A Strategic Approach*, vol. 1, 4th ed. by Randall Knight (Pearson Addison-Wesley). You may use older editions if you wish, but you are responsible for knowing any content changes.
- Laboratory Manual: *Experiments for an Introductory Physics Course*, 2016 ed., Hayden-McNeil Publishing. Visit <https://www.physast.uga.edu/courses> for the lab syllabus.
- A Turning Technologies response device or app ("clicker"). Bring it to every class; we will be using clickers throughout the semester for participatory activities.
- A simple scientific calculator for exams, which must be *non-programmable, non-graphing, and non-symbolic*. Calculator graphing, algebra-solving, or programming functions will NOT be permitted on the exams. Cellphones will not be allowed during exams.
- Homework assignments will be performed online and are necessary to develop understanding throughout the course. You will access them with an account on LON-CAPA at <http://spock.physast.uga.edu/>.
- Please check your UGA email daily. The UGA email system will be used (infrequently) for announcements.

Optional Course Resources

- The eLearning Commons (<http://www.elc.uga.edu/>) will serve as a repository for homework solutions, grades, practice problems, and tutorials.
- *Tutoring*: Tutors are available either through the Academic Resource Center at Milledge Hall and Miller Learning Center or through the Department of Physics and Astronomy (<http://www.physast.uga.edu/tutors/>).
- If you cannot come to the regular office hours, or need additional help, please set up an appointment (by email, by phone, or in person) to see the instructor outside of class. For email correspondence, include your class and time in the subject line.
- *The Student Workbook*, R. D. Knight, Pearson. Additional problems and solutions in this student study guide.

Grading Policy

Your overall grade will be weighted as follows:

20%	Cumulative final exam grade
45%	Three in-class exams
15%	Laboratory grade
15%	Homework grade
5%	Attendance

Letter grades will be assigned following:

A	93.0 – 100.0
A-	90.0 – 92.99
B+	87.0 – 89.99
B	83.0 – 86.99
B-	80.0 – 82.99
C+	76.0 – 79.99
C	73.0 – 75.99
C-	70.0 – 72.99
D	60.0 – 69.99
F	less than 60.0

Regrade requests:

Any requests for a regrade of an assignment or an exam are under the instructor's discretion and must be made no later than one week after the item is returned. For a regrade, the instructor will look at the entire assignment/exam, not just one problem, and it may raise *or lower* your score. Arithmetic errors in adding up points will be handled separately. Regrade requests should be accompanied by all your work.

Withdrawal and Incomplete:

The Undergraduate Bulletin and the Registrar's Office website describe the University policies regarding withdrawals and incomplete (<http://reg.uga.edu/policies/withdrawals>). If you don't complete the initial required administrative tasks of the course (e.g. the questionnaire you may be withdrawn from the class). However, if you are demonstrably not attending class and completing work ("excessive absence") this is not justification for me to submit a withdrawal.

A grade of Incomplete is not appropriate for a student who has missed a large portion of the course assessments, for whatever reason. The *Withdrawal Deadline* is March 24, 2022.

Exam Policy

There will be three in-class exams and a cumulative final exam. All exams are closed-book, closed-notes exams. The format of the exams will be discussed in class but will include qualitative as well as quantitative problems. There will be no make-up midterm exams; if you do not take an exam, you get a zero. However, if you miss a midterm exam for a *serious, documentable reason*, the grade of your final exam may be used to replace your lowest in-class exam score (this would make your final exam worth 40% of your grade). You must contact the instructor as soon as you possible and submit documentation of your absence *within a week*. Do not simply presume that your situation or documentation merits an excused absence; that determination is not your prerogative. Make-up final exams will be given only for students with legitimate, documentable reasons and **MUST** be arranged **PRIOR** to the final exam.

You must bring a non-programmable calculator to each exam and be comfortable with its functions. A formula sheet will be provided for each exam. This sheet will be updated and posted to the ELC for viewing before the exam day. The class should be familiar with the formulas before taking each exam.

Unless told otherwise, you must show your work on each problem in order to receive full credit. Therefore, it is in your best interest to show all of your work and thought processes in the exam answer area provided. An incorrect answer without any accompanying work will be given zero points. A correct answer without any work will not receive full credit.

Solutions:

Solutions to the exam will be posted on the ELC after every student has taken the exam.

Final Exam Scheduled Date: Monday, May 9, 7:00-10:00pm

Location: TBA

Homework Policy

Homework is an essential part of the learning and understanding physics. Working through problems enables you to practice problem solving techniques, apply the methods you learn in class, and recognize areas that you may struggle with the material. Homework assignments will be assigned weekly to keep up with the pace of the class and ensure you master the concepts before moving to the next.

Logistics:

Weekly problems sets will generally be due before **midnight (11:00 pm)** online through the LON-CAPA system. Occasionally, the homework will require a written response to be handed directly to me or placed in my office mailbox (**before 5 PM**). I *will not accept* written homework responses that are slid under my door. Responses will be graded for correctness, although for some problems, incorrect responses may earn partial credit. Your best preparation for the exams will be to complete the homework assignments. You can access the homework sets through spock.physast.uga.edu or tuvok.physast.uga.edu and login with your UGA ID.

Dropping the lowest two:

*In the case that you **complete the online course evaluation** at the end of the semester, I will drop your two lowest homework grades. If you do not fill out the course evaluation, then all of your homework scores will be included in your average. The intent of this policy is to encourage you to fill out the evaluation, but also to compensate for unavoidable circumstances (e.g. illness, emergency, etc.). Late problem sets will not be accepted or excused.*

Teamwork vs. Plagiarism

Working together with your fellow classmates is *strongly* encouraged. However, your goal should be to attempt every problem on your own and then turn to your classmates for a team effort, and not plagiarism. The answers you submit should be your own! Discussing physics is a great way to learn, but simply asking someone how they solved a certain problem is not effective, will not help you prepare for the individual exams, and is in fact a form of plagiarism. Copying from someone else's work, or other homework solutions, is a form of plagiarism and a violation of academic honesty policies. In addition, I understand that internet searches can provide you with solutions or help you to work through a problem, but *fundamentally understanding* the problem and the solution are key to being successful in this class

Attendance and Reading Quiz Policy:

The reading assignments are your responsibility to read *before* you attend class and are listed on the course schedule. Your time spent in class will be much more meaningful and beneficial if you have viewed the material beforehand. The schedule contains the reading assignment for each week based on the topic that we will cover. **We will often have a short, multiple-choice quiz at the beginning of class using the "clickers".**

During class, we will work through many example problems and discuss the solutions. You may be asked to present your activities on the board or turn them in for additional points that will be added to the clicker points total for that day. It is imperative that you bring a calculator to class each day and participate as these activities are designed to solidify your knowledge of the concepts or bring up any questions you may have about the material.

In addition, we will have several activities during class that will require the use of the “clickers”. It is in your best interest to attend class regularly and participate.

Labs

Labs begin the second week of classes. Attendance is mandatory. Please visit <https://www.physast.uga.edu/courses/> to read thoroughly the lab syllabus for the section in which you enrolled.

Technology Policy

During class, cellphones, iPads, iPods, and laptops need to be turned off or silenced. Devices that use a stylus are permitted for *note-taking purposes*. Standard laptops will not be useful for taking notes during class, due to the large number of diagrams, equations, and graphs required. Texting, checking email, Facebook, etc. can be distracting to you and those behind you. Please be respectful to your fellow students.

Student Distress

If your course performance is significantly affected by issues beyond your control, I urge you to let me know and to seek assistance promptly from the [Office of Student Support Services](#). It is always easier to address exceptional circumstances when you raise these concerns as early as possible. Waiting until the end of the semester to take action may limit my ability to provide appropriate support.

Academic Support

The Division of Academic Enhancement (DAE) offers free peer tutoring for some of UGA’s most challenging courses. For courses, locations, and times, please visit the website listed below. In addition to peer tutoring, the DAE also provides Academic Coaching, Student Success Workshops and more. The DAE is committed to the success of all students at the University of Georgia. For more on these and other resources, please visit dae.uga.edu

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 <https://ovpi.uga.edu/academic-honesty>. This policy covers all academic work.

As a UGA student, you are responsible for knowing and understanding this policy. If you have any question about the appropriateness of your actions or your work, you are obligated to ask me for clarification.

I take the issue of academic honesty very seriously, and it is my responsibility to uphold the University's policy. This means, among other things, that I won't hesitate to report my suspicions of dishonesty to the Office of the Vice President for Instruction. Typical consequences of cheating on homework or an exam range from receiving a zero for that grade, to failing the course.

Student Responsibilities

- You are responsible for all material: homework problems, assignments given in class, and assigned readings.
- You are responsible for all announcements made in class.
- Read the assigned portions of the textbook before class.
- Do all homework assignments.
- Attend ALL laboratory sessions in your assigned laboratory section.
- Know the University's policies concerning withdrawals and incompletes.
- Ask me if you do not understand **anything**. There is no dumb question.
- Physics is fun and everywhere!

CORONAVIRUS INFORMATION FOR STUDENTS FOR Spring 2022 CLASSES

Face coverings: Following guidance from the University System of Georgia, face coverings are recommended for all individuals while inside campus facilities.

How can I obtain the COVID-19 vaccine? University Health Center is scheduling appointments for students through the UHC Patient Portal

(<https://patientportal.uhs.uga.edu/loginindividualauthentication.aspx>). Learn more here:

<https://www.uhs.uga.edu/healthtopics/covid-vaccine>. The Georgia Department of Health, pharmacy chains and local providers also offer the COVID- 19 vaccine at no cost to you. To find a COVID-19 vaccination location near you, please go to: <https://georgia.gov/covid-vaccine>. In addition, the University System of Georgia has made COVID-19 vaccines available at 15 campuses statewide and you can locate one here: <https://www.usg.edu/vaccination>

What do I do if I have COVID-19 symptoms? Students showing COVID-19 symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5p.m.). 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 for COVID-19? If you test positive for COVID-19 at any time, you are required to report it through the DawgCheck Test Reporting Survey. We encourage you to stay at home if you become ill or until you have excluded COVID-19 as the cause of your symptoms. UGA adheres to current Georgia Department of Public Health (DPH) quarantine and isolation guidance and requires that it be followed. Follow the instructions provided to you when you report your positive test result in DawgCheck.

Well-being, Mental Health, and Student Support If you or someone you know needs assistance, you are encouraged to contact Student Care & Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu/>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services. UGA has several resources to support your well-being and mental health: <https://well-being.uga.edu/> Counseling and Psychiatric Services (CAPS) is your go-to, on-campus resource for emotional, social and behavioral-health support: <https://caps.uga.edu/>, TAO Online Support (<https://caps.uga.edu/tao/>), 24/7 support at 706-542-2273. For crisis support: <https://healthcenter.uga.edu/emergencies/>. The University Health Center offers FREE workshops, classes, mentoring and health coaching led by licensed clinicians or health educators: <https://healthcenter.uga.edu/bewelluga/>

Monitoring conditions: Note that the guidance referenced in this syllabus is subject to change based on recommendations from the Georgia Department of Public Health, the University System of Georgia, or the Governor Office or. For the latest on UGA policy, you can visit coronavirus.uga.edu.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.