Contents of this syllabus are subject to change. You will be notified of any changes, and a new version of this document will be posted online.

Introduction
Welcome to Physics 1211! The first semester of a two-semester introductory course sequence in physics for science majors. Students are assumed to have basic skills in differential calculus, decent skills in trigonometry, and advanced skills in algebra.

Objectives
The primary objective of this course is to engage you in a process that is central to physics: *modeling physical phenomena by applying a small set of fundamental principles*. The modeling process encompasses explaining and predicting physical behaviors; making appropriate approximations and simplifications for complicated physical systems; and communicating results through mathematical and numerical expressions, diagrams and visualizations, graphs, and even “plain English.” We will be focusing on the topic of mechanics (forces, momentum, Newton’s laws of motion, etc.).

If you’re considering a major specifically in physics or astronomy, this particular course may not be the one for you. Please talk to Dr. Wiegert (physics) or Dr. Caillault (astronomy) about other options.

Prerequisites
Some differential and integral calculus will be used in the course. In order to do well in this course, you should also have a *solid working knowledge* of college algebra, trigonometry, and plane geometry.

Basic Information
Instructor: Dr. Jarrad Pond Email: jarrad.pond@uga.edu
Office: 234 Physics Building
Class: 221 Physics Building
   Mon., Wed., and Fri., 10:10 am – 11:00 am
Final Exam: Wed., May 2nd, 2018: 8:00 am - 11:00 am; Location: Classroom
Office hours: Thu., 2:00 pm – 3:30 pm & Fri., 9:00 am – 10:00 am or by appointment

Course Resources
Required Materials
- The textbook for this course is *Physics for Scientists and Engineers, A Strategic Approach*, vol. 1, 3rd (or 4th) Edition, by Randall D. Knight (Pearson Addison-Wesley).
- 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 scientific calculator. A simple calculator such as the TI-30X series will do just fine, but a fancier graphing calculator is also acceptable.

Online Resources
• Your UGA email account will be subscribed to a low-volume announcement list. It is your responsibility to be informed of all announcements sent via this email list: check your UGA email daily!
• The eLearning Commons will serve as another repository of course information, esp. for exam grades, at http://www.elc.uga.edu/. Please do not email me on eLC. I will likely not see the email until it is too late. Please contact me though UGA mail.
• Online assignments, both before and after class, are an essential part of the course. You’ll complete this work on the LON-CAPA homework system at https://spock.physast.uga.edu/.

Other Resources
• Office hours are your chance to get one-on-one or small-group help with homework assignments or with understanding topics from class. Please make use of this time; I can’t address your questions if you don’t ask!
• If you can’t come to my regular office hours, or need additional help, please set up an appointment (by email or in person) to see me outside of class.

Grading Policy and Assignments
Your overall grade will be determined from your course performance, weighted as follows:

20% Cumulative final exam grade (the final exam is mandatory).
45% Three in-class exams (20%/15%/10% for highest/middle/lowest grades)
20% Laboratory grade
10% Homework grade
5% In-class participation

Letter grades will be assigned from your overall numerical grade according to the following:

A 90.0  A–  87.5  B+  85.0  B  80.0  B–  78.5  C+  75.0  C  70.0  C–  67.5  D  60.0  F

Any requests for a regrade of an assignment or exam must be made no later than one week after it’s returned. For a regrade I will look at the entire assignment/exam, not just one problem, and this may raise or lower your score. Regrade requests (including those for online homework) should be accompanied by all your work.

Like any other measurement, grades possess a degree of uncertainty. Factors such as improvement, effort, and participation may help borderline grades. Lobbying, however, will not. There may be opportunities for extra credit in this course; however, requests for extra credit will be ignored.
Exams
All exams will be closed-book and closed-notes. You may use a scientific calculator for arithmetic only, not for algebra, calculus, or graphing; all memory and programs must be cleared.

Exams will comprise both conceptual and problem-solving questions, similar to homework, practice problems, and in-class examples. Unless told otherwise, you must show your work on each problem in order to receive full credit. Partial credit is awarded (based on your work) for incomplete or incorrect answers, so it is usually in your best interest to attempt every problem.

There will be no make-up midterm exams. If you need to miss a midterm exam for a serious, documentable reason, your final exam grade will be substituted for your missed midterms grade(s), making your final exam worth at least 30-40% of your overall grade (depending on how this grade compares to your other midterm exam grades). This policy is designed to handle unavoidable situations like medical or family emergencies, or previously scheduled academic or athletic events. You must contact me as soon as you know of the conflict (before the exam if at all possible), and you must provide sufficient documentation in a timely fashion. (An example of unacceptable documentation is a note stating only that you visited the health center, with no indication of the severity and nature of your illness.) Do not presume that your situation or documentation merits an excused absence; that determination is not your prerogative. Unexcused exam absences will result in an exam grade of zero.

A make-up final exam will be given only for legitimate, documentable reasons as explained above.

Homework
Sustained practice with physics problems is crucial to understanding physics, so you will have regular homework assignments. Assignments will be posted online through LON-CAPA, and most problems will require you to submit your answers online. However, a few assignments may also have a handwritten component.

Homework assignments will be weighted equally unless otherwise specified. At the end of the semester, provided that you complete a course evaluation, I will drop your lowest two homework assignment percentages in calculating your overall score. (If you don’t submit a course evaluation during the allotted time, then none of your assignments will be dropped.) This dropped-assignment policy compensates for the unavoidable circumstances that may occasionally prevent you from submitting homework on time (e.g., illness, scheduled event, Internet failure, etc.). Late homework won’t be accepted or excused. However, even if you miss the deadline to submit homework answers for credit, you should still make every effort to work through all the problems on every assignment, in order to master the topics covered. You will likely do very poorly on exams if you don’t work through each assignment in its entirety.

Teamwork is an effective way to learn, so I encourage you to collaborate with your classmates. Ask them questions; critique others’ work; explain your reasoning to your study partners. However, don’t mistake teamwork for plagiarism. You’re responsible for understanding all the details of every solution, and your solutions must be your own. Copying from any source
of homework solutions is a violation of academic honesty policies. Since you can’t collaborate on exams, homework is your best opportunity to develop your own problem-solving skills. If you have gotten this far in the syllabus, draw a light bulb next to your signature on the introductory questionnaire and syllabus comprehension form. Don’t discuss this with your classmates. Let’s see if they read the syllabus thoroughly too.

In addition, required readings will be posted online and/or announced in class, and you are expected to read these chapter and sections of the assigned textbook.

Labs
Labs begin the first full week of classes, January 8 - 12. Attendance is mandatory. Students who are not assigned a lab grade due to non-attendance will automatically receive a failing grade (F) for this course. The lab syllabus can be found here https://www.physast.uga.edu/courses. On this Webpage, under “Jump To:” click “Physics Lab” and look for your lab section.

Class Preparation
Be sure to regularly read the textbook before each class. This preparation before class is essential for you to learn well in class, just as it would be for a literature course.

In-Class Activities
You will often be asked in class to work on conceptual and quantitative questions, both individually and in small groups, and often using the “clickers”. These activities allow you to demonstrate your sincere effort and active class engagement.

A fraction of these in-class activity scores will be “dropped” (similar to the fraction of dropped homework assignments) to compensate for the occasional absence, clicker malfunction, or similar issue. I will not accept a written record of your responses as a clicker substitute, or otherwise excuse any absence from class.

During in-class activities, no off-task use of cellphones, iPads, iPods, or any other electronic/communication devices is permitted in the classroom. We have a very limited amount of time in our classes, and it is detrimental to spend it distracted.

Academic Honesty
UGA has a comprehensive academic honesty policy document, A Culture of Honesty, which is available from Office of the Vice President for Instruction at http://ovpi.uga.edu/academic-honesty/academic-honesty-policy. 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**

- **Above all, you have the right to expect courtesy from your fellow students, and the same will be asked of you.** Courtesy includes the expectation that everyone will come to class ready and willing to learn and to interact, and able to ask or answer questions freely. Courtesy also implies that you arrive on time and stay until the end of class.

- **Attendance is required.** Class attendance keeps you well connected to the course and to the members of your class. In physics courses, each new concept builds on earlier ones, so mastering key concepts is critical. If your schedule makes it difficult to attend class regularly and on-time, you shouldn’t take this course. The most common causes of missed classes are lack of sleep and time pressure from other obligations. If this happens to you, you need to seek out advice on how to set priorities and manage your time effectively.

  If you miss class, it’s your responsibility to find out what you missed. Talk to your classmates, and come to me with questions and for clarification.

- **You must prepare for class.** Class time is valuable and limited. Using that time effectively requires that you’ve had some exposure to the necessary concepts, so that you can ask good questions and practice applying those concepts in class. Please read the appropriate sections in the book prior to coming to class. Even if you feel you do not understand what you are reading, please put in the effort and come to class or office hours with questions.

- **I can’t emphasize enough the importance of homework!** Just as with other areas of learning, your physics problem-solving skills will improve only by practicing regularly and conscientiously. You’ll get very little value out of homework if you procrastinate, or if you depend on the efforts of others. If you start to get behind, get help early before the problem gets worse!

- **Ask for clarification on anything you find unclear, ambiguous, or unspecified.** This includes both course policies and physics topics. Ignorance is never a valid excuse.

- **The Undergraduate Bulletin** and the Registrar’s Office website describe the University policies regarding withdrawals and incompletes. If you don’t complete the initial required administrative tasks of the course or are demonstrably not attending class and completing work, I may withdraw you from the course for “excessive absence”.

  If you are considering withdrawing from the course, you should discuss your choice with me beforehand. In many cases, students are doing better in the course than they think they are.