

PHYS 2010 GENERAL PHYSICS 1

SYLLABUS – Fall 2020

Course Number: **PHYS2010 – 002 (942)**
 Class Meeting Times: **Mon/Wed/Fri 10:25 – 11:20**
 Location: Brown Hall 370 and Remote

Textbook: College Physics, 11th hybrid edition by Serway and Vuille

Webassign class key: etsu 5388 9229

Webassign is mandatory.

An ebook version of the textbook comes with webassign.

If you want a hardcopy version of the book, that is up to you.

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Office: Brown Hall #351

Phone# 439-8625

Scheduled Office Hours: **M/W/F 11:30 – 12:30 and T/Th 2:05 – 3:00**. Office hours are sketchy now with the COVID-19 pandemic. My office can have room for maybe one student. If there is a crowd, it is a better idea to just stay after class (the classroom should still be empty) for any questions, or move to a larger room downstairs. Otherwise, email me any questions you have. If I need to adjust to office hours via zoom, I will set up a schedule on zoom with a webcam and the whiteboard in my office.

Tentative course outline

(Any changes will be announced in class)

Dates	Topics	Chapters
Aug. 24, 26, 28	Introduction, 1-D motion	1, 2
Aug. 31, Sept. 2, 4	1-D motion continued, Start 2-D motion	2, 3
Sept. 7, 9, 11	Finish 2-D motion	3
Sept. 14, 16, 18	Newton's Laws of Motion	4
Sept 21, 23	Newton's Laws of Motion	4
Sept. 25	Exam 1	Chapters 1-4
Sept. 28, 30, Oct. 2	Work and Energy	5
Oct. 5, 7, 9	Momentum, Start Circular motion	6, 7
Oct. 12, 14, 16	Finish Circular Motion, Start torque and equilibrium	7, 8
Oct. 19, 21	Rotational Equilibrium, Rolling Motion	8
Oct. 23	Exam 2	Chapters 5-8
Oct. 26, 28, 30	Solids and Fluids	9
Nov. 2, 4, 6	Finish Solids and Fluids, Start Thermal Physics	9, 10
Nov. 9, 11, 13	Thermal Physics, Thermodynamics	10, 11, 12
Nov. 16, 18	Thermodynamics	12
Nov. 20	Exam 3	Chapters 9-12
Nov. 23-27	NO CLASS, Thanksgiving Break	
Nov. 30, Dec. 2, 4	Emergency Catch up days/Review	
FINAL EXAM Schedule		Comprehensive
PHYS 2010 – 002 (10:25 – 11:20)	Wednesday, Dec. 9	8:00 AM – 10:00 AM

Attendance: My plans are to try to keep this class as close to a normal classroom experience as possible. Lectures will be taught from the classroom and a new camera is in the process of being added to the smart room technology. There will be room for some students to show up in person and spread out to watch the lectures live in person. This is for the students who really want a face-to-face classroom experience. **Just like a regular semester, attendance is not mandatory, but is strongly encouraged. This class is meant to be synchronous and I am going to try my best to provide a normal experience for those who want to be present.** Additionally, I have three sections (M/W/F 10:25 – 11: 20, T/Th 11:15 – 12:35, and T/Th 12:45 – 2:05) each getting the lectures broadcast through zoom. The zoom codes are the same for all three classes, so students can access any of them. For example, if you miss class or know you will miss class, there are opportunities to log into the other section's lectures. Therefore, I am not going to save lectures for students who neither show up nor watch remotely. Students that come to class and/or log into the Zoom meetings, generally do better than those who do not. Also, keep in mind that any changes to the course schedule, such as the date of an exam, will be announced during class. There is a lot of material to cover in this class and earlier material does build upon to some of the later chapters. Completing all the chapters requires a steady pace, and therefore it is important for students to keep up. The best way to keep up is to attend/log into class and preview the chapters ahead of time. ***As with many things in life, what you put into this course will result in what you get out of the course.*** When watching a class through zoom, it is in your best interest be as actively engaged in the class as if you were attending in person. This includes asking and answering questions. Do not be surprised if I call upon students during class, whether you are present or logged into zoom. When logging into zoom, use a handle that identifies you. Do not use something generic like "iphone" as potentially more than one student might do that. If at the end of the semester I want to see who logged in regularly, I need to know who is who. With the nature of my lecturing style, I do not just stand still behind a podium or in front of a computer screen. If you enter something into the zoom chat box, there is a good chance I will not see it for a while. This means do not be afraid or too shy to speak up and ask questions.

Homework: For each chapter, a set of problems is to be submitted for a grade on webassign. This will constitute 10% of your total semester grade. The webassign class key is given at the beginning of the syllabus. If you have not used webassign in the past, the easiest way to enroll, is just go to webassign.net. Click on "enter class key". Enter the key and you are in and then you can later register. There is a free two-week trial period. If you stay in the class, make sure you register and pay for webassign by the end of the two weeks so you continually maintain your access. **Enroll on webassign ASAP. Not signing up for webassign is not a valid excuse for not doing the homework.** The first assignment is a webassign tutorial to get acquainted with the program. The second assignment is a math review. This

assignment is meant to give an idea of the type of mathematical skills that will be needed throughout the semester. If you find the math review assignment to be difficult, you need to consider how much time and effort will be needed to develop the required math skills to succeed in this class, or you should reevaluate if you are adequately prepared to take General Physics. The first two assignments are due on Friday, Aug. 28th at 10 PM. The due dates for the remaining homework assignments will be the evenings before the exam that the chapters are tested on. For example the homework for chapters 1-4 will be due on the evening before the first exam. I very strongly suggest that you begin each chapter's assignment the day each chapter is started in lecture. It is not a good idea to procrastinate and have multiple chapters' homework assignments to do in a short time period. **The primary goal of the homework is to practice, and to prepare you for the exams. Treat the homework as an opportunity to practice to the best of your ability, and put in the time that is necessary to learn the material, and not just to get a grade. If you simply copy others' work and/or copy or memorize the solutions to homework problems, hoping identical problems will be on the exams, your semester may not go smoothly.** Keep in mind that since homework is for a grade, I will give tips, clues, or suggestions, but I will not fully work your answers out for you. If you do have the correct answer, and are just having formatting issues, ask and I will let you know. Just to be clear, I know all about some of the student body's favorite websites, such as chegg, course hero, and quizlet. You do not want to be dependent upon such websites to get through the class. It is extremely obvious when a student gets through entire chapter(s) of homework all in one night, gets them all correct and has a perfect homework grade, but come exam time cannot answer the same type of questions. One last comment about webassign. The program records and shows me your homework logs. It tells me when you open up the assignments and when you submit answers. Please do not tell me you need extra time to complete the homework, asking for an extension if you have been procrastinating. I will know. In addition, if you tell me about how much time you spend on the homework and I check and see that your homework logs say otherwise, I will be quick to point that out to you.

Exams:

There will be 3 exams given throughout the session, following as closely to the schedule on the syllabus as possible, **plus the final exam during final exam week.** There will be some conceptual questions to answer, but exams will mostly consist of problems involving calculations. The number of questions on each exam will vary and typically not be determined until the night before the exam is given. Exams on webassign will be graded out of the number of answers involved in the exam and taken as a percentage. Since the College of Arts and Sciences moved my class to a remote class, **exams are going to have to be given using a remote format.** Exams will be given on webassign, and will resemble a homework assignment with a few differences. Exams will have a time limit. During the exams, you will only have 1 submission per answer, just like a regular in-class exam. I will have it set up where

you can answer questions one part at a time if you wish. Webassign does not grade on partial credit, so answers will either be correct/incorrect. To reduce the consequence of this, I will relax the numerical tolerances some so rounding error should not play a role and eliminate any significant digit issues. I will also check manually in the multiple part questions, if your answers for the different parts match up logically, and then can override scores to avoid students being penalized multiple times for a mistake in the earlier question part.

More importantly, with the exams on webassign, they will become open note. (Normally only a formula sheet is provided) Notes and formula sheets that you have written and/or printed out will be allowed. Find them on D2L.

Webassign has a built in lock-down browser. Make sure you download it ahead of the first exam. Using the lock-down browser is mandatory. In addition, to keep students from communicating with outside help or using another device to search the internet, during exams the class will be monitored through a zoom meeting that you must log onto and be shown on video. This is not debatable. Use a second device such as a phone, tablet, or second computer with webcam to log into the zoom session. It is a good idea to turn your volume down on this device to avoid noise distractions. When setting up the zoom, use a name that identifies you. Do not just have something generic like 'iphone'. I ask this so that if there are multiple people with this zoom handle and someone asks me a question through the chat box, I need to know who to respond to. Depending on the lens of the camera involved, set up this device so that you and your workspace are in full view of the camera. Get all of your supplies for the exam, such as pencils/pens, scratch paper, notes and calculator before the exams starts so they are ready in place. It is a good idea to have the zoom device plugged into a charger to make sure it does not run out of battery mid-exam. I will send further comprehensive instructions closer to the exam date(s). In case you are asking why am I going through all these hassles. This is my attempt to keep everybody on a level playing field. This method went smooth over the summer. With the exams, going remote, the first three exams for my M/W/F section will be 65 (10:20 – 11:25) minutes in length. The final exam will still be 2 hours in length.

Making up work:

Homework will be done on webassign online, so this will not be an issue. As long as you have Internet access through home or through the school, it is accessible. Worse case scenario, use the internet at the library or other place on campus. Use the Wifi in the parking lots if needed. Another reason not to procrastinate. By not procrastinating, you reduce the consequences of any unforeseen emergencies. Replacement exams will only be allowed in extenuating cases (such as severe illness, injury, or family emergency such as a funeral...), or when a student is absent due to an approved university activity. If you do get too sick to take an exam, let me know as soon as possible and we will schedule a time for you to make up the exam. It is the student's responsibility to notify the instructor of such a circumstance, as reasonably as possible, and to schedule any necessary makeup work in a timely manner.

Grades:

Grades will be based on the following scores **%of grade**

Homework on webassign	10%
3 Exams each worth 20%	60%
Comprehensive final exam	30%
Total	100

How your final grade is determined:

$$\text{HW}\% \times (0.10) + \text{Ex1}\% \times (0.20) + \text{Ex2}\% \times (0.20) + \text{Ex3}\% \times (0.20) + \text{Final Exam}\% \times (0.30)$$

My grading scale:

Grade Earned	%
A	90
A-	88
B+	84
B	80
B-	76
C+	72
C	68
C-	64
D+	60
D	56
F	<56

I do not curve individual exams. At the end of the semester, if nobody earns a 90% or higher, the instructor may lower the "A" or other grade thresholds, as the instructor sees fit. The best students when compared amongst those in your respective section will get the best grades. This is to keep everything as fair as possible. I always rank students' grades only within the respective class section. Do not worry about what is going on in other sections.

Prerequisites:

The ability to perform algebra and trigonometry. This physics class is a problem solving intensive class, and the ability to perform algebra and trigonometry is extremely important. You will need to be able to manipulate equations and solve for unknown variables. This may include techniques such as using the quadratic formula, solving for multiple variables in systems of equations, among others. **No calculus or "advanced math" will be needed.** At times, you will need to observe and understand the geometry of physical situations and when needed, use geometric relations or perform trigonometry to determine unknown dimensions and/or vector components. If you need help with the math requirements, seek help outside of class.

Cell phones and computers:

The vast majority of the students will be watching remotely. For those that are present, out of courtesy to the rest of the class, silence your cell phones. You may choose to use a laptop or other device to take/view notes or follow along with the book if using an ebook. Use it wisely. Plus turn the volume off and do not distract others. For those that are watching remotely, just please try to avoid causing distractions to others through zoom. However, if I hear a cat or dog making noise, expect a request to show the pet on zoom.

Special needs:

Any student with a special need for an accommodation for any course activity or exam should meet with the instructor as soon as possible to make arrangements for any necessary arrangements. **If you need to meet with me, please do this at least a week before the first exam. Accommodations cannot be made retroactively. Do not wait until the end of the semester.**

Academic Integrity:

Students are expected to adhere to a code of academic integrity. Plagiarism, cheating, and other forms of academic dishonesty are strictly prohibited. **Any student who is found to commit such an act will be reported to the Dean's Office and will receive an F for the entire course.** Note: The classroom may be monitored or recorded during exams to provide evidence if I observe cheating during exams. If you observe other students cheating, you should act like an adult about it.

Here is an excerpt from the university course catalog:

East Tennessee State University is committed to developing the intellect and moral character of its students. To that end, all instances of plagiarism, cheating, and other forms of academic misconduct shall be punished in accord with Tennessee Board of Regents policy. Any knowledge of conduct of this nature should be reported to the proper authorities. Not reporting instances of academic misconduct represents a fundamental break with honor code policy and, although this offense is not punishable, reflects a callous disregard for yourself, your classmates, and your professors.

Here is the actual posted university honor code:

"East Tennessee State University is committed to developing the intellect and ethical behavior of its students. Students found to be in violation of policies on plagiarism, cheating, and/or fabrication will be held accountable for their actions. Any knowledge of academic misconduct should be reported. Students are expected to act with honesty, integrity, and civility in all matters."

Extra COVID Pandemic appendix to the syllabus.

I am anticipating only a small amount of students present for the lectures. This is why I emailed the class ahead of time, asking who really wants to attend class and have an in person learning experience. For those of you who are attending the lectures in person.

The university has a campus-wide mask mandate. Primarily for people that are indoors and not alone in a room. So bring/wear a mask to the classroom.

<https://www.etsu.edu/policies/health-safety/face-coverings.php>

If you are sick, and definitely if you are showing any of the symptoms of COVID, have a positive test, or were in close proximity with someone who has tested positive (example: your roommate) do not come to class. Watch the lecture through zoom.

Brown Hall #370 has 115 seats. The school guidelines are to space students out at least 6 feet apart. Seats in the classroom have already been marked. With the extra small amount of students attending, you can spread out even more.