PHYS-275 Sophomore Seminar, Spring Semester 2022-2023
Tues, & Thurs. 11:00am – 12:15 pm. Gosnell (GOS) 08-3130

Instructor: Dawn Hollenbeck Office: Carlson (CAR) 76-1264
E-mail: dmhsps@rit.edu Phone 475-6652
Office Hours: I'm generally available Monday, Wednesday, Friday, and some once my schedule gets a bit more sorted I'll post it on StarFish

Course goals: There are two main course goals. First is to give you an opportunity to step back and reflect on all the physics you have learned up to this point, exploring how topics relate to one another, investigating new problems that integrate multiple topics, and solidifying your understanding of the key concepts. The second is to learn important non-content skills that are critical to your future success: how to collaborate and communicate in ways that generate new ideas and knowledge. Much of this involves *active listening*, which we will define and practice and *effective communication*.

Course philosophy: We want to work with you to create an environment in which you can succeed, and can adapt much of the course format and structure to suit your individual personality. We welcome any suggestions or feedback you have for making this class an enjoyable reflection on what you have learned. Please reach out to any of us at any time if you want to talk.

Topics: The course covers mechanics at the level of UP1, electricity and magnetism at the level of UP2, and oscillations, simple harmonic motion and waves at the level of UP1 and UP2. **There will not be modern physics questions, nor will there be "Vibes & Waves" at the level of the intermediate course.** Example problems, along with solutions, will be posted to MyCourses.

Structure: Most of classtime will be spent working in groups of 3-4 students. Sometimes these will be collaboratory, with groups working together to solve a problem. Other times, one student will work on a problem "out-loud", presenting the solution and answering questions while the other students guide the process, ask questions and take notes for formative feedback. **Your ability to guide others through a problem (not just telling how to do it) correlates with success solving problems, so work hard to be genuinely helpful to your colleagues.**

A majority of your grade is determined by oral Q&A sessions with faculty. Twice you will meet 1-on-1 with a faculty member for ~30 min to answer a few questions at the board. The first session will be in mid-February (Mechanics), the second (E&M) in mid-March, and the third (Vibrations and Waves) near or during finals. At the last session you might be asked to repeat one one of the other sessions depending on how you did, you can request to repeat one session, and you might have one or two faculty there. The number of faculty depend on multiple factors and shouldn't be taken as a bad or good thing just a thing.

If you are going to be given an additional problem at the final session the second topic will be decided by you and the faculty in advance, and depend on your prior performance. You can expect that the questions from faculty in all of these sessions to be along the lines and at the level of the provided sample questions. However, the questions do not have to be limited to exactly what is provided.

1-on-1 problem sessions will involve myself and some additional SoPA faculty. You will have multiple opportunities to meet with the other faculty and some control over which lead your sessions. However, you will have me for at least one session.

Grading: Course grade depends on: in-class participation, out-of-class work (including meeting other faculty and "Scientist Spotlight" homework), and individual problem-solving sessions. The following proportions will be used:

Out-of-class work	15%
Class Participation	25%
Individual Problem Mechanics	20%
Individual Problem Electricity & Magnetism	20%
Individual Problem Vibrations and Waves	20%

Initial cutoffs are 90, 80, 70, 60% for A, B, C, D; + and – modifiers at instructor's discretion.

Passing the course requires a satisfactory performance on **each of the 3 topics** over the course of the semester. Final course grade will reflect overall performance, not just the individual components.

The problem sessions do not have a score like a regular exam. You do not gain or lose points, it is an overall grade.

If you are not attending or are failing the course, please drop or withdraw by the appropriate date. We will use Early Alerts to help identify issues.

Final exam: We will not be having a classical final. You might have your final problem session then if scheduling is a problem but no real final.

Covid Policy and Masking:
I would prefer you wear a mask because my mother lives with me and I really don't want to give her Covid. The other faculty that will be involved in the course with your problem sessions will generally prefer you wear a mask as well because of their close contacts. If you are sick please don't come to class. Just let me know.

Days off:
During the weeks we do the problem sessions, we will likely not be meeting both days.

If you need a day off for whatever reason that is ok, just let me know. We might have some days that I give you an assignment that is to go relax or similar.

Electronic Devices: None. You don't need them and in general I don't want to see them. You do not need to look up stuff, equations or numbers.

Plagiarism and Cheating:
Academic integrity covers a wide range of things, not just copying answers. If you find yourself in a questionable situation, please speak to a faculty member for clarification. The RIT student academic integrity policy can be found at: https://www.rit.edu/academicaffairs/policiesmanual/d080

Harassment and Discrimination: All members of the RIT community are expected to be respectful to contribute to a positive learning environment. Everyone should feel welcome in our class. No one should be made to feel as though they do not belong and we should all be respectful of the individuals in our class. Full details of the RIT policy prohibiting discrimination and harassment can be found at: https://www.rit.edu/academicaffairs/policiesmanual/c060

Be courteous to each other and if someone says that your words or behavior are unwelcome, then please respect those wishes. If someone else is offended at your words or actions, then you need to stop and use it as a learning experience.