PHY3101 Fall 2019
Midterm survey results

From 43 responses to the survey (responses from PH & PA in red):

1. **Pace/level/organization of the class (incl. office hours)**

Pace/level good 24
Pace/level fast 8 "A bit like drinking from a firehose" 1

Looks like the majority of the class thinks the pace & level are ok, if challenging. For those who feel overwhelmed, please let's design a way to help you get on track, see below.

Office hours good, helpful 9
dismissive comments 1
can't make them 2

IF YOU CAN'T MAKE POSTED OFFICE HOURS (there are 5 hours during the week), please make an appointment. Several students have arranged to meet outside of office hrs. If we urge you to try to work a bit harder to figure out something on your own, we do not mean it as dismissive, and we apologize if we left that impression. When discussing HW problems, we have to balance explanations with a desire to avoid simply working the problem for you, which we believe will inhibit real understanding of the concepts. Real learning occurs when you struggle with the problem yourself.

"Having a lot of info on the physics website instead of Canvas annoying/confusing." 3

We need to maintain the physics website to have a public presence for the course, so that prospective students can plan their courses, etc. Canvas is also clumsy for some things, and may be replaced (as it has been several times before). However, we understand that it may be a bit annoying to have to download materials from different places, so we will henceforth post all HW problem sets on Canvas, so that all materials will be downloaded from canvas. (Existing HW problem sets were copied over on Saturday.) Schedule, syllabus, announcements etc. will remain on physics site.

"More overlap between lecture, textbook and notes." 5
"Page numbers in the chapter for reading before class" 2

We perhaps haven't clarified sufficiently that MAIN READING MATERIAL IS CLASS NOTES. Textbook is there to give you an alternate perspective, and explain in a bit more detail. We hope this issue will be resolved also by specifying clearly which sections we recommend you read.

"Can you talk about your own research and how material is relevant?"

We will be mentioning our research when we come to Solid State Physics and Particle Physics.

"Tough to keep it organized when professors go out of town"

We will not be going out of town simultaneously for the rest of the semester. The couple of times this occurred earlier were for unexpected last-minute reasons and our replacements covered the material we gave them.

"Would be nice if powerpoints were shared before class instead of after."

We find ourselves fine-tuning the lectures until just before class. Sorry, we cannot do this.

"I appreciate how material from last class is reviewed"

We will continue to try to do this, along with a more precise description of what you should be reading and focusing on for the upcoming lectures.

"It would be better to know which math derivations are needed and which are not"
"More proofs" 2 "fewer derivations, more examples" 7

We try to show you derivations of important formulae not because we necessarily expect you to rederive them on an exam, but because the mathematics is the language and structure of physics. We cannot derive everything because of lack of time, but as you advance in physics you will be exposed to deeper and more comprehensive mathematical methods and derivations, and we hope what we cover will serve you as a good introduction. We have been trying, and will continue to try to include more examples.

2. Homework

Just right ("Challenging, but helpful"): 22
Too hard: 9
Too easy: 0!

"Lectures sometimes behind HW" 5

We take this criticism very seriously. It's not fair if we are lecturing on Friday about material on a HW set due that afternoon. On the other hand we don't want to have a HW set on material from the previous week or before, because it is no longer fresh in your minds. We will try to make sure that we have lectured on material needed for the HW by Wednesday, but occasionally we have difficulty anticipating how long a topic will take, sometimes because you have lots of questions (☺). We will consider postponing the due date if such a situation arises.

"More worked examples that matched HW" 3

Since many HW problems are a bit involved, examples at this level may take too much time in class to explain. We have done a few, and can try to do more. What may be easier will be for us to take a HW-type problem and discuss how you set it up, rather than solving it completely. This we can try to do a bit more often.

"More HW similar to what is on test" 2

As we discussed in class, test problems are like the simpler HW problems, simply because we don't have time to pose the more involved one, and we would prefer to test you on physics rather than very long calculations.

"Too much 'plug and chug' " 1

We interpret this as a complaint about some of the other kind of HW problems, which are involved, and involve some tedious math, plugging in numbers, etc. We feel that it's important, particularly in a counterintuitive subject, that you get a feel for numbers and units. We will continue to emphasize this in some problems.

"More 'practical' problems"

There are very few quantum problems that apply to your everyday life, unless you include in your everyday life the universe you live in, the sun that provide light, and the matter that makes up everything.

3. HITT quizzes

Fair: 32 Problematic: 8

"Can we have quiz drops instead of normalization by 0.8?" 2

Effectively they do exactly the same kind of thing to your grade, allow you to miss some quizzes for whatever reason (note that we use a similar 0.85 factor for the HW). Our Large Course committee discusses and sometimes decides department policy about issues of this kind. Most faculty members believe that the normalization scheme was fairer and this scheme is used in the large courses.

4. Tests

Fair: 27 "Fair, accurately tests material" "Appreciated the review beforehand"
"It was a perfect test, I'd say. I just shouldn't have made so many dumb mistakes."

Too hard: 3 "Insanely hard"

"Problem 1 (picture of particle interaction processes) was misleading"

We will try to explain diagrams more clearly on next test. Remember, if you are confused as to what a diagram means, we are always happy to explain during the test.

"More practice exams" 3

It's hard to find old exams that match our detailed topics, because we have switched textbooks over the years. We will try find some with significant overlaps, and tell you which problems to ignore.

"Please pre-exam review of major concepts, not examples."

Reviewing the important equations and concepts will take a couple of hours, and is really your responsibility. In our experience, most students prefer to see examples during exam review, where important concepts necessary to do the problem naturally arise, and questions can be posed about them.

5. Other comments

"I enjoy the bonus problems" "More bonus opportunities"

We will stick to the syllabus policy that the bonus questions, which take a great deal of time to grade (because so many people are doing them, which is a good thing), will be handed out occasionally, and there will be no other "extra credit". We expect to have 5 bonus questions. We also plan to have another programming session where we can go over some best practices.

"Please hand back HW in class"

We missed a couple of times, but will try to always hand it back in class. Generally we bring them with us to class for the next couple of lectures, so you should ask if you have not gotten your HW back in time.

"More opportunities to engage the department?"

If you are interested in research opportunities in the department, we can give advice during office hours.

"Best class at UF!"

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