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| Course name | Physics 5B, Introduction to Physics II |
| Meeting place, time | Thimann 3, MWF 9:30–10:40 AM |
| Instructor | Gey-Hong (Sam) Gweon |
| Office hours | Tue 11-12, Wed 11-12, Fri 1-2, OBA |
| Instructor coordinates | ISB 249, gweon@ucsc.edu, http://griffin.ucsc.edu |
| Textbook | <i>Physics for Scientists And Engineers With Modern Physics</i> , 4th ed., Giancoli |
| References | <i>Physics for Scientists and Engineers</i> , Knight <i>Fundamentals of Physics</i> , Halliday, Resnick & Walker |
| Course website | http://griffin.ucsc.edu/teaching/current |

One place to remember It is the above course web site. It will be a central depository of information, and it will also host some important course activities. All information above and below will be made accessible on the course web site, with proper updates.

Email address Email communication will be very important for this course. Please make sure that you are not missing any emails (cf. Questionnaire).

Course objectives In this course, we will learn basic concepts of simple harmonic oscillator, waves, optics, fluids, and statics. This segment of the introductory physics may be called the “wave mechanics” as the wave is the central notion. That is the wave mechanics in the *classical* regime. This is a very useful thing to do by itself, but you will also discover that it becomes very useful later on, when you learn more advanced topics of physics.

Evaluation This course will be evaluated based on the homework (about 25 %), the quiz (about 10 %), two midterms (about 40 %) and the final (about 25 % or more). There will be two types of quizzes: reading quiz before class, and clicker quizzes during class. As long as you participate in these quizzes, you will get nearly perfect points, even if you choose incorrect answers. This is not to give you free points, but to let you learn without stress. Please read the last sentence one more time and keep it in your mind throughout this course.

Enrollment issues We will be ironing out enrollment issues in the first week or two. Please contact me in person or by email in these periods.

5M This laboratory course is closely tied to this course. Nonetheless, it is formally separate from 5B. I do not have the authority to answer your questions regarding 5M. The instructor for 5M is George Brown.

MasteringPhysics We will be using this homework system. Information on this will be available within two or three days.

Get help! Any one can use some help every now and then. Really! Getting no help adversely affect most students, in my observation. Getting help starts with asking questions. No question is a bad question during my lectures or my office hours, so do not be afraid to ask any question that comes up! That is the best way that you can start helping yourself. Also, make active use of TA discussion sections and the MSI/LSS tutoring sessions. (Their schedules are not set yet, but will be made available in a few days, also.) The emphasis is on “active.” Do not simply accept a solution, *internalize/assimilate* it. You need to chew on it, until every piece of it becomes part of you. Otherwise, you will not be helping yourself, and you may be just helping your homework score, soon to become meaningless.

Academic integrity However, one should not get/give help when it is not allowed (during exams), or in ways that are not allowed (e.g., you should not copy other people’s solutions for homework, quiz, etc., or let others copy yours). Likewise, you should never engage in other activities that breach the academic integrity. To assure fairness, I will be monitoring for possible activities that breach the academic integrity. If confirmed to be involved in such an activity, you will fail this course.

Emergency If highly unusual personal circumstances arise to prevent you from participating in core course activities (exam, homework, quiz, etc.), you should communicate with me as soon as you can, so that you will get the best consideration for makeup opportunities. Per the University-wide policy, I can *not* accept any “medical documentation.”

Extra credits Generally speaking, if you truly try to learn without worrying much about your grade, your grade should follow. Extra credit opportunities will make this truth come alive.

Lecture plan The following information may be updated on the course web site. One very well-known secret to success: **read before class!**

| Week | Lecs | Dates | Ch | Subject | Lab |
|------|----------|------------------|-------|---------------------------------|--------------|
| 1 | 1,2,3 | Jan 7,9,11 | 14 | Simple harmonic oscillator | |
| 2 | 4,5,6 | Jan 14,16,18 | 15 | Wave | SHO |
| 3 | 7,8 | Jan –,23,25 | 16 | Sound | Wave |
| 4 | 9,10 | Jan 28,30; Feb 1 | 32 | Midterm I , Reflection | Wave |
| 5 | 11,12,13 | Feb 4,6,8 | 32,33 | Refraction, Lenses | Resonance |
| 6 | 14,15,16 | Feb 11,13,15 | 33,34 | Lenses, Interference | Optics |
| 7 | 17,18 | Feb –,20,22 | 34,35 | Interference, Polarization | Optics |
| 8 | 19,20 | Feb 25,27; Mar 1 | 35 | Midterm II , Diffraction | Polarization |
| 9 | 21,22,23 | Mar 4,6,8 | 13 | Fluids | Interference |
| 10 | 24,25,26 | Mar 11,13,15 | 12 | Statics | Fluids |
| 11 | 27 | Mar 18,–,22 | | Review, Final (8-11 AM) | |