Physics 1110

Summer 2015

Physics 1110 Course Syllabus

University of Colorado at Boulder

Physics 1110, General Physics 1, is the first semester of a two semester sequence in introductory physics. We will cover topics in mechanics, Newton’s Laws, concepts of energy, work, conservation of energy, rotational motion, gravity, sound, waves, fluids, and heat. The summer course is taught with five weekly lectures and five weekly recitations. We use the recitation to practice problem solving and to sharpen your reasoning about physics. The material is presented at a level that requires some calculus, algebra, and trigonometry.

Lectures:
MTWRF 9:15 AM to 10:25 AM in Duane G1B30

Recitations:
MTWRF 11:00 AM to 12:10 AM in Duane G2B60, 75 or 77

Instructor:
Jennifer Gannon
gannonjl@colorado.edu
Web page:http://www.colorado.edu/physics/phys1110/phys1110_sm15

Course materials (available at the bookstores)

Required:
1. Tutorials in Introductory Physics, Lillian C. McDermott, Peter S. Shaffer and the Physics Education Group, to be used in the recitation sections.

2. Homework: Tutorials in Introductory Physics Lillian C. McDermott, Peter S. Shaffer and the Physics Education Group, written homework sets.

3. iClicker for class participation

Optional:
4. Essential University Physics, Volume 1, Richard Wolfson.
Schedule

Week 1  Ch. 2-4 (1D Motion, Vector Math, 2D Motion, Newton’s Laws)
Week 2  Ch. 5-8 (Newton’s Laws Applications, Work and Energy, Conservation of Energy, Gravity)
Week 3  Ch. 9–12 (Linear, Rotational and Angular momentum, Statics)
Week 4  Ch. 13 -17 (Simple Harmonic Motion, Waves, Sound, Fluids, Heat)
Week 5  Ch. 16 - 17, continued

Homework

The CAPA system is available on the internet at http://www.colorado.edu/physics/CAPA/Cindex.html, or from the course home page at http://www.colorado.edu/physics/phys1110/phys1110_sm15. CAPA is a tool that provides you with immediate feedback on your solutions to homework problems. If you take the time to start homework early, there is no reason why you cannot have a perfect homework score by the end of the class.

The first homework will review the use of CAPA. In addition to CAPA assignments, there will be two written homework assignments each week. These assignments will be from the workbook Homework: Tutorials in Introductory Physics, by Lillian C. McDermott, Peter S. Shaffer, and the Physics Education Group, and will typically be due in the homework turn-in box in the Physics HelpRoom (Duane G2B90) by 5PM on Wednesdays and Fridays.

In-class “Clicker” responses

We will also be using an audience response system to allow in-class questions and answers to conceptual questions during lecture. Typically, we will have brief periods of lecture, followed by a series of multiple choice questions. Class discussion is encouraged. After a short period for discussion, you will use your “clicker,” an electronic transmitter used for audience feedback during lecture. Purchase your clicker at the CU bookstore and use the instructions at http://www.colorado.edu/oit/clicker-registration to register it. If you already have a clicker from a previous course you may use it.

You will receive one participation point for each answer, and one additional point for the correct answer. The lowest three days from your clicker scores will be dropped from the final average.
Exams

Exam 1 (Ch 2-4) : Monday, June 8th, 11am G1B30
Exam 2 (Ch 5-8) : Monday, June 15th, 11am G1B30
Exam 3 (Ch 9-12) : Monday, June 22th, 11am G1B30
Exam 4 (Ch 13-17) : Tuesday, June 30th, 11am G1B30
Final Exam (Ch 2-17) : Thursday, July 2nd, 9:15am G1B30

Exams are scheduled as above. You are allowed to bring a single 8.5"x11" sheet with whatever information you care to have on it to the exam. Calculators are allowed as well. You will not be allowed to use the textbook during the exams.

Internet resources, web page, and e-mail

The web page for Physics 1110 provides information on the class activities, contact information, course notes, access to the CAPA system, and access to a variety of online resources. I strongly encourage you to use the Physics 1110 web site. E-mail and the webpage are essential channels of communication in this course. Be sure to check your email for important messages at least once a day. Your scores and items such as exam solutions will be posted on our Desire2Learn (D2L) site, https://learn.colorado.edu/.

Students with Disabilities or other special needs

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least five days prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu.

If you have a temporary medical condition or injury, see Temporary Injuries under Quick Links at Disability Services website (http://disabilityservices.colorado.edu/) and discuss your needs with your professor.

Students with religious obligations that conflict with the exam dates should contact the professor early in the semester so that accommodations can be made.