Phy 167 – General Physics II – Fall 2019

Instructor: Dan Kabat
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Office hours: Monday and Wednesday, 3 – 4pm

Textbooks:

Douglas Giancoli, *Physics: Principles with Applications,* seventh edition
ISBN 978-0-321-62591-5 for the book plus access card.
It's on reserve in the library, or available for $270 from Amazon.

Lab manual – available for free in the physics office Gillet 131, or online at www.lehman.cuny.edu/faculty/kabat/manuals.html

Grading: midterms 45%
final exam 25%
homework 10%
laboratory 20%

Midterms: there will be three midterm exams, tentatively scheduled for

September 23 in Gillet 024
October 30 in Carman B04
November 20 in Carman B04

Exams are closed book and closed notes. You can bring one $8\frac{1}{2} \times 11$ sheet with formulas on it. Each midterm counts for 15% of your grade. There are no make-up exams except for documented medical emergencies. Exams will be held in the rooms listed above, not the regular classroom.

Final: there will be a comprehensive final exam. It's scheduled for Monday December 16, 6:15 – 8:15pm in Gillet 024.

I expect you to do your own work on exams. It's not acceptable to copy someone else's work or to let someone else copy from you. Calculators are permitted. *But cell phones and all other electronic devices are prohibited and will get you an automatic F.*

Homework: will be done through a system called Mastering Physics. You can buy access to Mastering Physics online, or you can buy an access code together with the textbook. I usually assign homework on Wednesdays, due Sunday of the following week. Homework is due on the date assigned. I don't accept late homework.

Laboratory: attendance at your weekly lab/recitation session is required. Department policy is that students with more than two absences will fail the course. Experiments can only be made up for documented medical emergencies, and only during the week they're originally scheduled. If you miss a lab let me and your lab instructor know as soon as possible. Labs begin the first week of classes with a lab tutorial.

Grading policy

Letter grades will be assigned according to the guidelines

$$\begin{aligned} A &= 90 - 100 \\ B &= 80 - 90 \\ C &= 65 - 80 \\ D &= 50 - 65 \\ F &= \text{below } 50 \end{aligned}$$

The cutoffs for +'s and −'s will be decided at the end of the semester.

Tutoring

Tutoring is available in the Science Learning Center, Gillet 133. Textbooks and study questions are available. Hours for this course will be posted on the door.

Study guides

Study guides for each exam have been posted on Blackboard. The guides list the sections in the textbook and have links to Kahn Academy. I encourage you to use them as we go along.

Accommodating disabilities

Lehman College is committed to providing access to all programs and curricula to all students. Students with disabilities who may need classroom accommodations are encouraged to register with the Office of Student Disability Services. For more information, please contact the Office of Student Disability Services in Shuster Hall room 238, phone (718) 960-8441.

Learning objectives

After taking this course you will be able to analyze and solve quantitative physics problems involving electricity, magnetism, optics, quantum mechanics and thermodynamics.

Course outline and schedule

Here's a tentative schedule for the semester.

dates	topic	chapter	sections
8/28, 9/4, 9/5	Coulomb's law, electric field	16	1,2,3,5,6,7,8
9/9, 9/11	electric potential	17	1,2,5,7,8,9
9/16, 9/18	current, Ohm's law, power	18	2,3,4 (skip stuff on temperature),5
9/23	exam 1	–	–
9/25, 10/2, 10/7	basic circuits, RC circuits	19	2,3,6
10/16, 10/21, 10/23	magnetism	20	1,2,3,4,5,6,7
10/28	Faraday's law	21	1,2,3
10/30	exam 2	–	–
11/4	electromagnetic waves	22	2 (just Fig. 22-7 and equation 22-3),3
11/6, 11/11, 11/13	mirrors, refraction, lenses	23	1,2,3,4,5,7,8
11/18	diffraction	24	3,6
11/20	exam 3	–	–
11/25, 11/27	quantum mechanics	27	3 (just $E = hf$),12
12/2	radioactive decay	30	8,9,11
12/4	temperature, ideal gas	13	2,6,7,8,9 (just $KE = \frac{3}{2}kT$)
12/9	heat	14	1,2,3,4,5
12/11	entropy	15	7 (time permitting)

No class on 9/2, 9/30, 10/9, 10/14. Class will meet on Thursday 9/5 (Monday schedule). It doesn't matter for the lecture, but Wednesday 10/16 is also on a Monday schedule.

Attendance will be taken at each class. A sign-up sheet will be passed around.