PHYSICS 135bL
SUMMER 2012

Prof. Gene Bickers

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Office hours: MTh 2–4

Lecture hours: MTuWTh 12–2
Lecture location: GFS 106
Laboratory location: KAP B11

NOTES

Physics 135bL is the second course in the physics sequence for students majoring in the life sciences or preparing to enter a health–related profession. A working knowledge of algebra and trigonometry is assumed. Use of trigonometry will be restricted to simple situations (i.e., almost entirely to right triangles). The course will cover aspects of electricity and magnetism, electromagnetic waves, special relativity, and atomic and subatomic physics.

TEXTS:

Giancoli: *Physics*, Sixth Edition, Pearson Prentice Hall

"General Physics Laboratory Manual" (online)

HOMEWORK:

Homework will be assigned each week and will be due the following week at the beginning of the Tuesday lecture. Homework solutions will be posted on the Web at the Blackboard site

https://blackboard.usc.edu

Collaboration on homework is encouraged, but it is expressly NOT ALLOWED to obtain solutions from a solution manual, from an on–line source, or from students who have previously taken the class. Use of solutions obtained in any of these ways constitutes an academic integrity violation and may result in a failing grade for the course.

LABORATORY:

The procedures to be followed in the lab will be explained by the lab instructor at the first meeting on Wednesday, June 27, or Thursday, June 28.

The laboratory grade determines 20% of the final course grade. All laboratory work must be completed before the final exam.

Students who are repeating Physics 135bL and who have satisfactorily completed the laboratory may be excused from repeating it. Obtain written permission from the Undergraduate Physics Office in SGM 407. A copy of the permission form must be given to the instructor during the first week of classes.

EXAMINATIONS:

There will be a single two–hour midterm exam on Wednesday, July 18, during the regular lecture slot. The three-hour final exam will be on Tuesday, August 7, from 12 noon to 3 PM. You must take both exams. The course grade will be computed as follows:

Midterm	30%
Final	35%
Laboratory	20%
Homework	15%
Total:	100%

Please seek help immediately if you are having difficulty with the course. Help is available from the lecturer and the lab instructor.

STUDENTS WITH DISABILITIES:

Students who need to request accommodations based on a disability are required to register each semester with the Office of Disability Services and Programs (DSP). In addition a letter of verification to the instructor from DSP is needed for the semester you are enrolled in this course. If you have any questions concerning this procedure, please contact the instructor and DSP at STU 301, 740–0776.

ACADEMIC INTEGRITY:

Homework assignments may be done in collaboration with other students, and help is also available as noted above. **Under no circumstances should students seek out homework solutions from alumni of PHYS 135b or from any other printed or on–line solution sets or manuals.**

Failure to abide by these rules will result in an automatic zero for the assignment involved and a report to the Office for Academic Integrity. Violations may also result in an F for the course.

READING SCHEDULE

Week	Start date	Chapter	Subject
1	6/27	16	electric charge and field
2	7/2	17–18	electric potential and energy; electric currents
3	7/9	19–21	DC circuits; magnetism; Faraday's Law
4	7/16	21–23	AC circuits; electromagnetic waves; geometric optics
5	7/23	24–25	wave optics; optical instruments
6	7/30	26–27	special relativity; quantum theory
7	8/6		REVIEW

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HOMEWORK ASSIGNMENTS AND EXAMS

HW Set	Due Date	Chapter	Practice Problems
1	7/3	16	4, 12, 17, 20, 24, 28, 40, 52, 64
2	7/10	17	5, 9, 15, 18, 22, 30, 35, 39, 44, 52
		18	3, 8, 10, 13, 20, 22, 27, 33, 38, 47
3	7/17	19	2, 8, 14, 19, 22, 25, 32, 37, 41, 50
		20	1, 7, 13, 17, 22, 28, 50, 62
		21	3, 8, 14, 18
• **MIDTERM – Wednesday, July 18 – Ch. 16–20** •			
4	7/24	21	22, 23, 29, 31, 35
		22	11, 15, 31, 40, 42
		23	3, 9, 10, 20, 22, 27, 32, 37
5	7/31	23	43, 49, 53, 59, 86, 90
		24	3, 15, 20, 25, 30, 35, 41, 45, 56
		25	7, 11, 16, 18, 25, 28, 34, 39, 50
6	8/6	26	4, 9, 11, 17, 23, 31, 37, 44
		27	5, 8, 11, 17, 26, 36, 40, 47, 51, 57
• **FINAL EXAM – Tuesday, August 7** •			