

Course Outline

Course: Physics for Science and Engineering II

Instructor: Dr Alakabha Datta

Office: 121-B Lewis Hall

Meeting: Tues 11 am- 12.15 pm at Lewis 101

Thurs 11 am-12.15 pm at Lewis 101

Office Hours: Tues and Thursdays 10am-10.50 am or by appointment.

Email: datta@olemiss.edu, datta@phy.olemiss.edu

Phone: (662) 915-5611

Course homepage: <http://www.phy.olemiss.edu/~datta/212.html>

Also check Blackboard.

NOTE: You should take the Lab Phys 222 along with this course if you have not already passed it.

Book



Fundamentals of Physics, 7th Edition

David Halliday, Univ. of Pittsburgh

Robert Resnick, Rensselaer

Polytechnic Institute

Jearl Walker, Cleveland State

Univ.

ISBN: 0-471-21643-7

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1136 pages

Student Site:

<http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=2037&itemId=0471216437>

Course Goals: Learning basic laws of physics concerning electromagnetic phenomena and its application to various engineering sciences and to everyday life. You will also learn to analyze problems logically and systematically.

Marking: Homework 30%

Homework: I will assign weekly homework that has to be turned in one week. There is a 25% penalty for late HW submission. No homework will be accepted three days after the due date. Please write your name in block letters and include the problem set number with your homework.

Midterm Exam: 25%

Midterm will be given over two classes. Dates will be announced later.

Final Exam: 45%

Wed Dec 6, 2006 at noon (See Class Schedule)

An overall course average of the following percentages will guarantee the corresponding letter grade:

90%	A
80%	B
70%	C
60%	D

Topics Covered in course: Topics will be taken from the following chapter. Click on the chapter link to access useful information.

[Chapter 21: Electric Charge](#)

[Chapter 22: Electric Fields](#)

[Chapter 23: Gauss' Law](#)

[Chapter 24: Electric Potential](#)

[Chapter 25: Capacitance](#)

[Chapter 26: Current and Resistance](#)

[Chapter 27: Circuits](#)

[Chapter 28: Magnetic Fields](#)

[Chapter 29: Magnetic Fields Due to Currents](#)

[Chapter 30: Induction and Inductance](#)

[Chapter 31: Electromagnetic Oscillations and Alternating Current](#)

[Chapter 32: Maxwell's Equations; Magnetism of Matter](#)

[Chapter 33: Electromagnetic Waves](#)

[Chapter 34: Images](#)

[Chapter 35: Interference](#)

[Chapter 36: Diffraction](#)

[Chapter 37: Relativity](#)

[Chapter 38: Photons and Matter Waves](#)

[Chapter 39: More About Matter Waves](#)