

Department of Physics
 Winter 2010 Physics 1B Jan 5, 2010
 Electricity and Magnetism
 (Concurrent enrollment in Physics 1BL is required)

Instructor: Professor Robert Dynes rdynes@ucsd.edu
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 Office hours: Tues and Thurs 2-3pm

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Course Coordinator:

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Lectures:

TuTh	12:30p - 1:50p	YORK	2722
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Problem discussions:

PB	01/11/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	01/18/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	01/25/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	02/01/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	02/08/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	02/15/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	02/22/2010	M	7:00p - 8:50p	LEDDN	AUD
PB	03/08/2010	M	7:00p - 8:50p	LEDDN	AUD
Final Exam:	03/16/2010	Tu	11:30a - 2:29p	TBA	TBA

See "UC Policy on Integrity of scholarship" in the UCSD General Calendar/

Labs: Concurrent Labs Starting the same week. For questions, contact the lab instructor.

Prerequisites: Physics 1A and 1AL and prior or concurrent enrollment in Math 10C-D or 20C

Approximate Lecture Schedule. This is only approximate. I will try to keep this schedule but with quizzes taking a lecture time and some concepts take more time to teach, I will probably not rigidly maintain this schedule.

Week 1 (Jan 4-8) Chapter 15 Charges, Coulomb's Law, Electric Fields

Week 2 (Jan 11-15) Chapter 16 Gauss' Law, Electric Potential, Quiz on Jan 14

Week 3 (Jan 18- 22) Chapter 16 Equipotentials, Capacitance, Energy

Week 4 (Jan 25-29) Chapter 17 Capacitor combinations, Electrical Current, Quiz on Jan 28

Week 5 (Feb 1-5) Chapter 17 Ohm's law, Superconductivity, Energy and Power

Week 6 (Feb 8-12) Chapter 18 Simple circuits, Kirchoff's law, RC circuits. Quiz on Feb 11.

Week 7 (Feb 15-19) Chapter 19 Magnetism, Magnetic fields around currents. Magnetic forces on moving charges(currents).

Week 8 (Feb 22-26) Chapter 19 Ampere's law, electrical torque, Quiz on Feb 25

Week 9 (March 1-5) Chapter 20 Magnetic Flux, Induced emf. Lenz' law, RL circuits

Week 10 (March 8-12) AC circuits, electro-magnetic waves

Final Exam: March 16		Tu	11:30a - 2:29p	TBA	
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