



0595-1829: Physics II for Engineering Students

Spring Semester 2014

LECTURER

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SYLLABUS

(chapter numbers refer to Halliday, Resnick, and Krane, (5th ed.); supplementary material can be found in Griffiths)

1. Electrostatics: Coulomb's Law, the electric field, Gauss' Law (*ch. 25-27*)
2. Electrostatic potential and potential energy (*ch. 28*)
3. Differential form of Gauss' Law, Poisson and Laplace equations (*suppl.*)
4. Electrical properties of materials; capacitors and dielectrics (*ch. 29-30*)
5. DC circuits (*ch. 31*)
6. The magnetic field: currents and charges in magnetic fields (*ch. 32*)
7. The Biot-Savart Law and Ampère's Law (*ch. 33*)
8. Differential form of Ampère's Law (*suppl.*)
9. Faraday's Law of Induction (*ch. 34*)
10. Magnetic properties of matter (*ch. 35*)
11. Inductance (*ch. 36*)
12. Displacement current, Maxwell's Equations (*ch. 38 and suppl.*)
13. Electromagnetic waves (*ch. 38*)

TEXTBOOKS

1. D. Halliday, R. Resnick, and K. S. Krane: *Physics*, 5th edition, vol. 2 (Wiley)
2. D.J. Griffiths: *Introduction to Electrodynamics* (also available online)



COURSE POLICY

1. There will be one mid-term exam. The grade will count for 20% in the final grade, only if it's higher than the final exam.
2. All sections of the course will take the same final exam.
3. Homework exercises are a **requirement** for passing the course.

EVALUATION

The course grade will be calculated based on the following scheme:

	Weighting
Midterm Examination	20%
Final Exam	80% (100%)