Physics 362 - Electricity and Magnetism

MW 03:05PM - 04:20PM
Location: **Physics 130**

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Office hours: Wednesday 9:00-10:30 am + 15 min. after the class

TA: TBD, e-mail: TBD at duke.edu

Office hours: Monday and Friday 3:00-4:00 pm

Textbooks

Griffiths, D. J. Introduction to Electrodynamics, 4th edition.

Syllabus

Electrostatics: Coulomb's law, Gauss's law, electric potential and conductors, the method of images, multipole expansion, electric fields in matter. (Griffiths Ch. 2, 3.1-2, 3.4, 4)
Magnetostatics: Lentz force, Biot-Savarat law, Ampere's law and magnetic fields in matter. (Griffiths Ch. 5, 6)
Electrodynamics: Ohm's law, Faraday's law, Maxwell's equations, Poynting vector (Griffiths Ch. 7, 8.1).
Electromagnetic waves and radiation (Griffiths Ch. 9.2-4, 10.1, 11.1).
Elements of relativity (Griffiths Ch. 12).

Homework

Will be communicated by email

Graded Material

Problem sets (mostly weekly): 40 %
Midterm exam: 20 %
Final exam: 40 %

Final EXAM

MWF/MW/WF, PERIOD 5, 3:05 or 3:20 PM Wednesday, December 13 9:00 AM - NOON

Midterm:

Tentatively on Wednsday, October 25 during the class time

Fall 2017, last updated: 19 July 2017.
Originally prepared for Fall 2017.
