

# PHY302: Electromagnetic Theory II

**Instructor:** Professor V. J. Goldman  
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office hours: Thu 2:30-4:30, and by appointment

**Text:** D. J. Griffiths, *Introduction to Electrodynamics*, 4th edition, Prentice Hall, 2013

## Course organization and grading:

- Two 1.5 hour lectures per week (ESS-069, TueThu 11:30 - 12:50)
- **Homeworks** (paper only) will be posted on Thursdays, due next week Thursday in class
- Late HW: in B-137 only (slide under the door, if closed), **not** in mailbox, **not** to TA
- Late HW penalty: 20% per day, so that model solutions can be posted promptly
- Exams: two Midterms (**March 3** and **April 7**, in class) and Final (We, May 11, 2 hours only)
- Exams are closed book, except can bring 2 (two) **handwritten** pages
- Course grade = 25% HW + 20% each Midterm + 35% Final. The Final exam is comprehensive.
- There is no provision for doing extra or outside work to improve your grade.

## Course outline (continues Phy 301):

1. Conservation laws in electrodynamics
2. Electromagnetic waves in vacuum
3. Electromagnetic waves in matter
4. Potential formulation of electrodynamics
5. Radiation of electromagnetic waves
6. Electrodynamics and special relativity

Material will be presented primarily in lectures, readings assignments from the text, and homework problems. Lecture will cover the material to be learned, some important examples, and will direct your study from the text, however some material will be presented in class that is not in the text. Generally, students who attend the lecture do better on exams and have overall better class experience. Thus, you should attend class, pay attention while there, and take notes over the material. You should plan on 2 - 3 hours of study outside of class for every lecture. The Final exam is comprehensive.

**Working together:** Students are encouraged to study in small groups, discuss the material and HW problems. It should be perfectly clear that each person is responsible for completing and submitting the work. It is NOT acceptable to divide the problems, when one solves problem 1 and the other problem 2. Exchange of any information between the students during an exam is unacceptable.

**Note:** If you have a disability that may affect your ability to carry out the assigned course work, you are urged to contact the staff of the Disabled student Services, Room 133, Humanities. DSS will review your concerns with you and determine what accommodations are necessary and appropriate. All information and documentation of disability is confidential and will not be shared with faculty.

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