

PHYS 4031/5031 – Electricity & Magnetism

Fall 2018 Syllabus

Course webpage: http://inpp.ohio.edu/~meisel/PHYS4031/phys4031_home.html

Instructor: Asst. Prof. Zach Meisel Office: 204 Edwards Accelerator Laboratory

Email: meisel@ohio.edu Office hours: 3:00-4:00pm Monday, or by appointment

Class location: Clippinger 132A Class times: 10:45-11:40pm, Monday Wednesday Tuesday

Required text: "Introduction to Electrodynamics" David J. Griffiths

Overview:

The purpose of this course is to obtain familiarity with basic concepts in electrostatics and magnetostatics, both in vacuum and involving dielectric media. This will necessarily involve refreshers in vector calculus and various mathematical techniques. Knowledge of calculus and physics at the introductory level are assumed and course content should be accessible to any undergraduate student in Physics & Astronomy Department in their 3rd year or beyond. This course is the first part in a two-part series.

The course will consist of lectures three times a week, intermixed with in-class group assignments. Additional learning tools will include frequent homework assignments, two midterm exams, and a final exam.

A preliminary schedule appears at the end of this syllabus.

Comments on Homework & Group Work:

Students are encouraged to work together on homework assignments outside of class and are required to work together on group assignments during class. However, you must submit your own written and/or programmed solutions to each problem. Copying will not be tolerated and will result in a zero on the assignment and possibly in the course. Doing the work yourself is how you will learn. If you didn't do it, you didn't learn it. In that case, why take the class?

Exceptions for homework deadlines must be pre-arranged. Only official university excuses will be accepted for absences, but other exceptions can be made with sufficient advance notice or for special circumstances. Late homework assignments will incur a 15% penalty per day.

Exams:

There will be two midterm exams (September 21 and October 24, in class) and a final exam (December 10th 10:10am in the regular classroom). In a sense all exams are cumulative, as this is the nature of the material in this course. Of course, each exam will focus more on the material from the preceding section of the course.

Grading:

The final course grade will be determined using the weights listed below:

- *Group Work:* 5%
- *Homework:* 20%
- *Midterm Exam 1:* 25%
- *Midterm Exam 2:* 25%
- *Final Exam:* 25%

The final letter grade will be determined based on the following scale, though a more lenient scale may ultimately be adopted:

95–100% A; 90–92.9% A-; 87–89.9% B+; 83–86.9% B; 80–82.9% B-; 77–79.9% C+; 73–76.9% C; 70–72.9% C-; 67–69.9% D+; 63–66.9% D; 60–62.9% D-; 0–59.9% F

Attendance:

Come to class! If you have a good reason not to be there, please let me know.

Academic Honesty:

I trust you will act in an academically honest fashion. If you have any questions about what does or does not constitute academic misconduct, please let me know.

Academic Misconduct is a Code A violation of the Ohio University Code of Student Conduct. If you are found to be involved in academic misconduct regarding this course, you will receive a zero on the pertinent work and possibly for the entire course and/or referral to the Office of Community Standards and Student Responsibility. University Judiciaries may impose additional sanctions. Procedures for judicial actions will be invoked as described in the Student and Faculty Handbooks. This is all a big hassle, so just be honest!

Planned Schedule: (Subject to change. Advance notice will be given as early as possible.)

~~Red~~ are days with no class. **Bold** are exam days. Other notes are tentative plans.

Homework due dates are also noted by the underlined assignment name, e.g. HW1.

Chapters refer to sections of the required textbook for the course, "Introduction to Electrodynamics" by David J. Griffiths, 3rd or 4th edition.

<i>Month</i>	<i>M</i>	<i>W</i>	<i>F</i>	<i>Griffiths Chapter</i>
Aug.	27	29	31	1
Sept.	3 (Labor Day)	5 (End Ch.1)	7 (<u>HW1</u>)	1,2
	10	12	14 (<u>HW2</u>)	2
	17	19 (End Ch.2)	21 (Midterm 1)	2
	24	26	28 (<u>HW3</u>)	3
Oct.	1	3	5 (Reading day)	3
	8 (End Ch.3)	10	12	3,4
	15	17	19 (End Ch.4, <u>HW4</u>)	4
	22 (Pre-exam Review)	24 (Midterm 2)	26 (Post-Exam Review)	
	29	31	2	5
Nov.	5	7	9 (End Ch.5, <u>HW5</u>)	5
	12 (Veterans Day)	14	16 (<u>HW6</u>)	6
	19 (Review to-date)	21 (Thanksgiving)	23 (Thanksgiving)	
	26	28	30 (<u>HW7</u>)	6
Dec.	3	5 (End Ch.6)	7 (Exam Review, <u>HW8</u>)	6
	10 (Final Exam, 10:10am)			