

## PHYS 4201/6201 – ELECTRODYNAMICS I

Fall 2017

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Web Page: [www.physast.uga.edu/~loris/astr4201/prob.html](http://www.physast.uga.edu/~loris/astr4201/prob.html)  
Class Hours: MWF 12:20 – 1:10 PM in Physics 327  
Office Hours: MW 3:30 PM – 5:00 PM (or by appointment)  
Call Number: PHYS 4201: 25800  
                  PHYS 6201: 25801

Textbook: *Introduction to Electrodynamics –4<sup>th</sup> ed.* – David J. Griffiths (Pearson: Addison Wesley) - Required. It will also be used in PHYS 4202.

This course is an upper-level physics course dealing with the basics of electrodynamics theory. This is a two-semester course and PHYS 4201 is the first part that deals primarily with vector analysis, electrostatics, electric fields in matter, and magnetostatics. I assume you have at least two years of Calculus and PHYS 3700 and PHYS 3900 as part of your background.

Grading: 4 to 8 homework problems will be assigned each week on the Monday class of that week. They are due the following Monday. You may work with others in the class on the homework, but, if you choose to do so, you must write on the homework who you worked with. There is no penalty for working with others, but I will assign the same exact grade to all the people who worked on the problems together. I will not grade all the problems assigned, but will choose two from each homework assignment to grade. Your weekly performance on the two chosen problems that are graded will dictate your final homework grade.

There will be three midterms; on Monday, September 18<sup>th</sup>, on Monday, October 16<sup>th</sup>, and on Monday, November 13<sup>th</sup>. The final exam for this course is cumulative and will be on Friday, December 8<sup>th</sup>, from noon till 3 PM. The homework will constitute 15% of your grade, the midterms 20% each for a total of 60%, and the final 25%. If you miss an exam, you will have to schedule a makeup exam within one week of the original exam date. For every two days that any homework assignment is late, ten points will be deducted from the final score for that homework.

Your numerical score based on the above percentages will be calculated at the end of the semester and letter grades will be assigned using the following scale:

A	corresponds to 90.00 – 100.00
A-	corresponds to 87.00 – 89.99
B+	corresponds to 84.00 – 86.99
B	corresponds to 80.00 – 83.99
B-	corresponds to 77.00 – 79.99
C+	corresponds to 73.00 – 76.99

C	corresponds to 70.00 – 72.99
C-	corresponds to 60.00 – 69.99
D	corresponds to 50.00 – 59.99
F	corresponds to less than 50.00

All students are responsible for knowing, understanding, and abiding by the academic honesty policy of the University of Georgia, which can be found online at <http://honesty.uga.edu>

If you have any questions about this policy and how it pertains to your work in this course, please ask me for clarification.

You are responsible for all topics discussed in class, as well as class announcements. Although attendance is not mandatory, it is in your best interest to attend every class and absence from class does not excuse you from the above responsibility.

If you have any questions or concerns about this syllabus, please contact me.

***Tentative*** Class Schedule & Readings:

Week of      Topic/Readings

August 13 – introduction – vector analysis– Ch. 1

August 20 – more on vector analysis – Ch. 1

August 27 – more on vector analysis – Ch. 1

Sept. 3 – Labor Day holiday on Sept. 4 – even more on vector analysis – Ch. 1

Sept. 10 – electrostatics – Ch. 2

**First midterm: September 18<sup>th</sup> – Ch. 1**

Sept. 17 – electrostatics – Ch. 2

Sept. 24 – electrostatics – Ch. 2

Oct. 1 – special techniques – Ch. 3

Oct. 8 – special techniques – Ch. 3

**Second midterm: October 16<sup>th</sup> – Ch. 2**

Oct. 15 – special techniques – Ch. 3

**Withdrawal Deadline – Thursday, October 19<sup>th</sup>**

Oct. 22 – electric fields in matter – Ch. 4

Oct. 29 – electric fields in matter – Ch. 4

Nov. 5 - electric fields in matter – Ch.4

**Third midterm: November 13<sup>th</sup> – Ch. 3 and 4**

Nov. 12 – magnetostatics – Ch. 5

Nov. 19 – Thanksgiving Break

Nov. 26 – magnetostatics – Ch. 5

Dec. 3 – magnetostatics – Ch. 5

Tuesday, Dec. 5 is the last day of classes

**FINAL EXAM – Friday, December 8<sup>th</sup> – Cumulative**