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: 5 to 10 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 16th, on Monday, October 14th, and on Monday, November 11th. The final exam for this course is cumulative and will be on Friday, December 6th, 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 exam will be 25% of your total score. 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

PHYS 6201 Requirements

If you are taking this course for PHYS 6201 credit (either as a graduate or undergraduate student) you will have to do an extra homework problem for each homework set (this will be graded in addition to the regularly graded problems. Also, on the final exam you will have to do two extra exam problems.

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 (e.g., changes in homework due dates or exam dates). 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 responsibilities.

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

Tentative Class Schedule & Readings:

Week of Topic/Readings

August 12 – introduction – vector analysis – Ch. 1
August 19 – more on vector analysis – Ch. 1
August 26 – even more on vector analysis – Ch. 1
Sept. 2 – Labor Day holiday on Sept. 2 – electrostatics – Ch. 2
Sept. 9 – electrostatics – Ch. 2
First midterm: September 16th – Ch. 1
Sept. 16 – electrostatics – Ch. 2
Sept. 23 – electrostatics, special techniques – Ch. 2-3
Sept. 30 – special techniques – Ch. 3
Oct. 7 – special techniques – Ch. 3
**Second midterm: October 14th – Ch. 2**
Oct. 14 – special techniques – Ch. 3
**Withdrawal Deadline – Monday, October 21st**
Oct. 21 – Fall Break holiday on Oct. 26 – electric fields in matter – Ch. 4
Oct. 28 – electric fields in matter – Ch. 4
Nov. 4 – electric fields in matter – Ch. 4
**Third midterm: November 11th – Ch. 3 and 4**
Nov. 11 – magnetostatics – Ch. 5
Nov. 18 – magnetostatics – Ch. 5
Nov. 25 – Thanksgiving break – Class will meet on Monday, Nov. 25
Dec. 2 – magnetostatics – Ch. 5
Wednesday, Dec. 4 is the last day of classes (Friday Class Schedule in Effect)
**FINAL EXAM – Friday, December 6th – Cumulative**