PHYS 4202/6202 – ELECTRODYNAMICS II
Spring 2018

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Web Page: 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: 27333
PHYS 6201: 27337

Textbook: Introduction to Electrodynamics –4th 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 4202 is the second part that deals primarily with magnetic fields in matter and time-varying electric and magnetic fields. I assume you have at least two years of Calculus and PHYS 3700 and PHYS 3900 as part of your background. Also, I assume you have taken PHYS 4201 or an equivalent course.

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 one or two from each homework assignment to grade. Your weekly performance on the one or two chosen problems that are graded will dictate your final homework grade.

There will be three midterms; on Wednesday, February 7th, on Monday, March 5th, and on Wednesday, April 4th. The final exam for this course is cumulative and will be on Monday, April 30th, 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 92.00 – 100.00
- A- corresponds to 88.00 – 91.99
- B+ corresponds to 84.00 – 87.99
- B corresponds to 80.00 – 83.99
- B- corresponds to 76.00 – 79.99
- C+ corresponds to 72.00 – 75.99
- C corresponds to 68.00 – 71.99
- C- corresponds to 60.00 – 67.99
- 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](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:

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic/Readings</th>
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<tbody>
<tr>
<td>December 31</td>
<td>introduction</td>
</tr>
<tr>
<td>January 7</td>
<td>magnetic fields in matter – Ch. 6</td>
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<td>January 14</td>
<td>magnetic fields in matter – Ch. 6</td>
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<tr>
<td>January 21</td>
<td>magnetic fields in matter – Ch. 6</td>
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<tr>
<td>January 28</td>
<td>electrodynamics – Ch. 7</td>
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<td>February 4</td>
<td>electrodynamics – Ch. 7</td>
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<tr>
<td><strong>First midterm: February 7</strong>th</td>
<td><strong>Ch. 6</strong></td>
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<tr>
<td>February 11</td>
<td>electrodynamics – Ch. 7</td>
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<tr>
<td>February 18</td>
<td>conservation laws – Ch. 8</td>
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<tr>
<td>February 25</td>
<td>conservation laws – Ch. 8</td>
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<tr>
<td>March 4</td>
<td>electromagnetic waves – Ch. 9</td>
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<tr>
<td><strong>Second midterm: March 5</strong>th</td>
<td><strong>Ch. 7</strong></td>
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<tr>
<td>March 11</td>
<td>Spring Break</td>
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<tr>
<td>March 18</td>
<td>electromagnetic waves – Ch. 9</td>
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Withdrawal Deadline – Monday, March 19th
March 25 - electromagnetic waves – Ch. 9
April 1 – potentials and fields – Ch. 10
**Third midterm: April 4th – Ch. 8**
April 8 – potentials and fields – Ch. 10
April 15 – radiation – Ch. 11
April 22 – radiation – Ch. 11
April 25 – Last day of classes
April 26 – Reading Day
**FINAL EXAM – Monday, April 30th – Cumulative**