

## Physics 432 : Advanced Electricity and Magnetism Spring 2004

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**Class meetings:** MWF 9:30-10:50 AM      AHON 123  
Class participation is required. Frequent unexcused absences and tardiness may result in grade reduction.

**Text:** *Introduction to Electrodynamics* (3<sup>rd</sup> edition) by David Griffiths  
This is generally regarded (and I strongly agree) to be the best undergraduate physics text in any class. It is very entertaining to read and the concepts are well explained. But, don't just read this textbook, pause often to think about what you've read to be certain you understand it. Try to work out the example problems before looking at the given solution. Since there will be no lecture, the book is your primary source of information.

**Office hours:** M W 2:30-3:30 PM  
You are welcome and encouraged to meet with me at any time which is mutually agreeable, even if it is not during my official office hours. I'm normally in the office M-F 9 AM to 5 PM and my class schedule (so you know when I'm busy) is posted on my web page [http://newton.uor.edu/facultyfolder/julie\\_rathbun/](http://newton.uor.edu/facultyfolder/julie_rathbun/).

**Exams:**  
The **final exam** will be **Wednesday, April 19<sup>th</sup> at noon**. This time cannot be changed. This exam is cumulative. There will also be two in-class exams on Friday, February 10<sup>th</sup>, and Friday, March 31<sup>st</sup>. Exams will be closed book and will contain both conceptual and quantitative problems. You may use a calculator for basic functions (addition, subtraction, multiplication, division, powers, exponentials, logarithms). You are on your honor not to use a calculator for advanced functions (including integration, differentiation, solving equations, unit conversions) or to store formulas or notes of any type in its memory.

**Grading:**  
Final grades will be based on the following:

In-class Exams (15% each)	30%
Final Exam	30%
Homework	30%
Class participation, group problems, & quizzes	10%

**Homework:**  
Physics is not a spectator sport! You will not learn to solve problems without regular practice, so homework is an essential part of this course. Homework will be collected approximately once a week. However, DO NOT wait until the last day to start it as you will not have enough time and have no where to go for help. You can expect to spend as many as 10 hours per week on homework. If you are spending more than this, please see me so that we can make sure you are spending your time efficiently. You are encouraged to work with your classmates on homework sets. However, you must write up the solutions alone (two sets should not be identical). As in "real life", you should give credit to any sources (including the textbook) or people (including your classmates) you find helpful. Also, by citing specific sections or equations from the text, your homework sets will be more useful to you in the future. To receive full credit, homework must be legible and your logic must be easy to follow (this goes double for exams). Obtaining the correct answer does not guarantee full credit. A solution with no written explanation is never sufficient. The meanings of equations, and their symbols, should be provided. Homework is due at 2:30 PM unless otherwise noted. No late homework will be accepted.

**Syllabus:**  
This syllabus is subject to change. The current, up-to-date version will be located on the class web site at [http://newton.uor.edu/facultyfolder/julie\\_rathbun/phys432.pdf](http://newton.uor.edu/facultyfolder/julie_rathbun/phys432.pdf).