This course is the second semester of electricity and magnetism at the undergraduate physics level. Time enters our theory of electromagnetic fields and we arrive at Maxwell’s equations — the complete classical theory of electromagnetism. The arrival happens pretty early in the term, and the bulk of our work will be to study electromagnetic waves and radiation.

The text is the book by Griffiths: *Introduction to Electrodynamics*, (Fourth Edition). We will attempt to cover Chapters 7–11 and perhaps part of 12. See the web page for a detailed schedule.

Another useful text is *Classical Electromagnetic Radiation*, Jerry B. Marion (1965) There is a revised 3rd edition by Mark A. Heald and Jerry B. Marion. This book is at the same level (more or less) as Griffiths. I’ll use it occasionally for lecture material. It will be the primary source for lectures on diffraction. It appears that can be downloaded as a pdf. Cheap used copies are available.

If you want to look at graduate-level texts, try *Classical Electrodynamics*, John D. Jackson (3rd edition 1999). This is the standard graduate text. Also *The Classical Theory of Fields*, Lev Landau and Evgeny Lifshitz (1951 and later; the 4th edition is revised substantially) and *Electrodynamics of Continuous Media*, Lev Landau, Evgeny Lifshitz, and L. P. Pitaevskii (1960 and later). At the graduate level but readable. You need both to cover all of E&M. The Landau and Lifshitz series all seem to be available as online pdfs.

Methods by which students will be evaluated and their grade determined: There will be homework (30%). The lowest-scored homework set will be dropped. There will be two exams and a final. The lowest grade on these three will be dropped and the other two will each make up 35% of your grade. Current UF grading policies for assigning grade points may be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific
times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575.

Details:

Course number: PHY 4324
Section number: 14431
Credits: 3
Time & Place: MWF 5th period (11:45–12:35) in NPB 1002
Final exam time: Wednesday, 12/12/2018 (10:00–noon) in NPB 1002
Web site: http://www.phys.ufl.edu/~tanner/Phy4324.html
Instructor: David Tanner
Office & phone: 2372 NPB — 392-4718
Email: tanner@phys.ufl.edu
Office hours: Mondays 3:00–4:00 pm and Wednesdays, 2:00–3:00 pm
Grader: Shinibali Bhattacharyya <s.bhattacharyya@ufl.edu>