

Physics 3302 --- Syllabus – Spring 2015
Tu Th 8:00 to 9:20 in BB 400

This course continues from Electricity and Magnetism, Physics 3301. It presents Classical Electrodynamics, as Ampère and Faraday and especially the Scotsman James Clerk Maxwell invented it.

Course Goals and Learning Objectives: The course will now concentrate on the dynamical, time-dependent Maxwell equations, their solutions, and the general principles on which electrodynamics is founded. Also, some of the mathematical techniques which are used in field theories. After a review of what you learned in 3301, I'm aiming to follow chapters 8 – 12 of the textbook, more or less in order. A substantial portion towards the end will be devoted to the Special Theory of Relativity.

1. Instructor: Dr. Dieter Forster, Professor of Physics
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Office Hours: Tu 2 to 4 pm, Fr 10 - 12.
2. Textbook: “*Introduction to Electrodynamics*”, by David J. Griffiths,
4th edition; Prentice Hall.
The course will largely follow the second half of this book, but with occasional changes to which I will alert you.
3. Lectures are the heart of the course. You will get much, much more out of them if you read the assigned chapter *in advance*.
4. Homework: Physics is learned by doing. Every week I'll assign some homework problems; they are due on Tuesdays at the beginning of class, and I will grade a subset of them. You are welcome to collaborate or seek help on solving these problems. Physics is understood by doing, and you should try to solve as many additional problems as you can. And read the book with care.
5. Grades: I'll make grades based on three in-class tests.
6. Examinations: First Test: Thursday, February 26, 8 am
Second Test: Thursday, April 2, 8 am
Final Exam: Tuesday, May 5, 8-10 am.