

Physics 415

Physics 415/615 Electromagnetic Theory

Spring 2018

Professor Ying-Chih Chen

Room 1238 HN

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Office Hour : Mon, Thur. 12-1pm or anytime I am free in the office

The prerequisites include PHYS 334 and MATH 254. Intensive drill of solving physical problems using advanced mathematical techniques is a key element of this course.

In Spring 2018, this course will be taught as a continuation of PHYS 334 based on Griffiths's book. We will first briefly review selected topics of Chapters 1-6 and then teach Chapters 7-12 to complete the treatment of electricity and magnetism as much as possible.

Textbook:

Introduction to electrodynamics, 4th edition, by David J. Griffiths. Pearson.

Topics:

- Review of selected sections of Chapters 1-6.
- Conservation laws
- Electromagnetic wave
- Potentials and Fields
- Radiation
- Electrodynamics and Relativity

Grading policy:

Two midterm examinations 50% (on March 5, 2018 and April 9, 2018)

Final examination 30%

Quizzes (6) 20%

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