Electromagnetism (電磁學)

Course No: 543 M4730
Lecture hours: Wednesday 2:20-5:20 pm
Classroom: IAM(應力所) Room 109

Instructor:
Ruey-Lin Chern (陳瑞琳)

Description:
This course is a fundamental lecture of electromagnetics, which covers the basic concepts and theories for electrostatics, magnetostatics, and electrodynamics including Gauss's law, Ampere's law, Faraday's law and Maxwell's equations. Students are suggested to have basic knowledge of general physics and engineering mathematics.

Course outline:
1. Introduction
2. Electrostatics
3. Special Techniques
4. Electric Fields in Matter
5. Magnetostatics
6. Magnetic Fields in Matter
7. Electrodynamics

Prerequisite:
Basic knowledge of General Physics and Engineering Mathematics

Textbook:
Introduction to Electrodynamics (3rd ed.), D. J. Griffiths, Prentice Hall, 1998

Reference:
Classical Electrodynamics (3rd ed.), J. D. Jackson, Wiley, 1998

Grading:
Midterm exam: 40%
Final exam: 40%
Homework: 20%