Syllabus

Phys 401 : Electromagnetic Theory I

Course	Phys 401
Course Title	Electromagnetic Theory I
Instructor	Ahmed Rashed, amrashed@go.olemiss.edu
	http://www.phy.olemiss.edu/~amrashed/index.html
Office	225 Lewis Hall
Semester	Fall Semester 2013-2014
Department	PHYSICS & ASTRONOMY
Credit Hours	3 hours
Meetings	5:00 – 6:15 Tuesday in Room 228
	3:14 – 5:00 Thursday in Room 211
Place	Room 228 & 211
Office Hours	12:00 – 2:00 Monday

Textbook

- **Title:** Electromagnetic fields
- **Author:** Roald K. Wangsness.
- **Publisher:** Wiley; 2nd edition (July 24, 1986)
- **ISBN-10:** 0471811866
- **ISBN-13:** 978-0471811862

Topics

1. Vectors
2. Coulomb's Law
3. The Electric Field
4. Gauss' Law
5. The Scalar Potential
6. Conductors in Electrostatic Fields
7. Electrostatic Energy
8. Electric Multipoles
9. Boundary Conditions at a Surface of Discontinuity
10. Electrostatics in Presence of Matter
11. Special Methods in Electrostatics

12. Electric Currents
13. Ampere's Law

Examinations	There will be two exams plus the final.
Grading	Homework Assignments 40%

Exam (1)   10%
Exam (2)   10%
Exam (3)   10%
Final   30%

A: 85% – 100 %;   B: 75% – 84 %;
C: 65% – 74 %;   D: 50% – 64 %.

Pre-requisite(s):

- Phys 212 (Minimum grade: D)
- Math 264 (Minimum grade: D)

Co-requisite(s):   Math 353

Attendance: There is no attendance requirement. However, if you miss an exam or cannot tirn in HW on time because of illness, I will require a doctor note. If you will be away for other reasons, inform me prior to your absence and get a note if applicable.

Academic Integrity: We will follow the University's policy of academic integrity (M-book). Violations of these policies will result in a failing grade and other disciplinary actions. In particular you are not allowed the use of the instructor's solution manual.

Any students with disabilities who need accommodation in this course are encouraged to speak with the instructor as soon as possible to make appropriate arrangements.