## Phys 402 : Electromagnetic Theory II

Course Course Title Instructor

## Office

Semester

Department

**Credit Hours** 

- Meetings
- Place
- **Office Hours**
- Textbook



Topics

Phys 402 Electromagnetic Theory II Ahmed Rashed, <u>amrashed@go.olemiss.edu</u> <u>http://www.phy.olemiss.edu/~amrashed/index.html</u> 225 Lewis Hall Spring Semester 2013-2014 PHYSICS & ASTRONOMY 3 hours 12:30 – 01:45 Tuesday & Thursday in Room 228 Room 228 12:00 – 2:00 Monday

- **Title:** Electromagnetic fields
- Author: Roald K. Wangsness.
- Publisher: Wiley; 2nd edition (July 24, 1986)
- ISBN-10: 0471811866
- ISBN-13: 978-0471811862
- 13. Ampere's Law
- 14. The magnetic induction
- 15. The integral form of Ampere's law
- 16. The vector potential
- 17. Faraday's Law of induction
- 18. Magnetic energy
- 19. Magnetic multipoles
- 20. Magnetism in the presence of matter
- 21. Maxwell's equations
- 22. Scalar and vector potentials
- 23. Systems of units- A guide for the perplexed
- 24. Plane waves
- 29. Special relativity

Examinations	There will be three exams plus the final.	
Grading	Homework Assignments Exam (1) 15% Exam (2) 15% Exam (3) 15% Einel 20%	35%
	A: 85% – 100 %; E C: 65% – 74 %; E	B: 75% – 84 %; D: 50% – 64 %.
Pre-requisite(s):	<ul><li> Phys 401</li><li> Math 353</li></ul>	

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.