Syllabus for Electromagnetics
ECE 3025C – Fall 2003

Class Description:

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<td>Electromagnetics</td>
<td>3</td>
<td>Greg Durgin</td>
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ECE 3025 Electromagnetics
Presentation of the laws and applications of electromagnetics. This course covers transmission line theory, basic electrostatics, Maxwell’s equations, and introductory concepts in electromagnetic waves.

Instructor: Greg Durgin
Office: 511 Van Leer (may switch to 509)
Office Hours: Monday 4:00 - 5:00 p.m.
Tuesday 9:00 - 12:00 p.m.
Supplemental hours during test weeks
Others by appointment
E-mail: durgin@ece.gatech.edu
Office Phone: (404) 894-2951
Class Web Page: http://users.ece.gatech.edu/~durgin/ECE3025

Textbook: First 5 Weeks: class notes


Prerequisites: Students must have taken ECE 2040 (Circuit Analysis) and one of the following math courses: MATH 2403 or MATH 2413. Note: Advancement in the ECE program requires students to complete ECE 3025 Electromagnetics with a final grade of at least C.

Grading:

20% Homework – Expect approximately 10 homework assignments over the course of the semester. Homework will be assigned on Wednesday and collected the following Wednesday at the beginning of class. Late homework is not accepted.

50% Midterm Examinations (3) – There will be 3 in-class examinations, each testing material covered since the previous midterm examination. The two highest midterm scores will count 20% each toward the final class grade; the lowest midterm score will only count 10% toward the final class grade.
30% Final Examination – There will be one final, comprehensive examination and it will count 30% towards the final class grade.

**Test Dates:** Tests will be administered on the following days:
- Midterm 1 – 19th September 2003 (Friday)
- Midterm 2 – 20th October 2003 (Monday)
- Midterm 3 – 24th November 2003 (Monday)
- Final Exam – 9th December 2003 (Tuesday), 8:00 – 10:50 a.m.

Any change to this schedule will be announced with advanced notice.

**Computer Usage:** The web will be used extensively in this class to disseminate homework assignments, lecture materials, and class announcements.

Some homework assignments may involve the use of Matlab software. Most students should have access to this software through a university computer lab or their own personal computing packages. If not, please inform the instructor.

**Tentative Lecture Topics:**

I. Transmission Lines  
II. Vector Calculus  
III. Electrostatics  
IV. Maxwell’s Equations  
V. Electromagnetic Waves  
VI. Wave Propagation  
VII. Waveguides  
VIII. Antennas

**Honor Code:** The Honor Code applies to every aspect of this class, with only one noteworthy exception: student discussion of concepts and techniques for solving homework problems is permitted and even encouraged outside the classroom. However, *all submitted work must be original.*