ECE3025                      Summer Semester, 2016

TITLE: "Electromagnetics"

INSTRUCTOR: Professor Ali Adibi

OFFICE HOURS: TTH 12:30-1:30PM. There will be an open door policy. Feel free to come for asking questions at any time the door is open.

CONTACT INFORMATION:
Office: 103 Bunger Henry Building, Phone: (404)385-2738, Email: adibi@ece.gatech.edu.

TEXTS:
Engineering Electromagnetics, by H. H. Hayt and J. A. Buck, 2005 (7th edition)
Class notes on transmission lines.

REFERENCES: A separate sheet is attached.

PREREQUISITES: ECE 2040, Math 2403

COURSE OBJECTIVES:
ECE3025 is the major course in the Electromagnetics area. It introduces basic concepts in electrostatics and magnetostatics as well as the dynamics of time-varying fields. Different properties of plane waves are discussed in this course, and the application of Electromagnetic laws in the analysis of transmission lines is carefully covered. This course provides the students with the necessary background for understanding different applications of Electromagnetics, i.e., antennas, waveguides, microwave systems, etc. As such, this is one of the most fundamental courses of electrical engineering that provides the required knowledge for understanding the operation principle, design, and optimization of several devices and systems in different disciplines (e.g., antenna, fiber optics, semiconductor devices, integrated photonic chips, optical equipment for imaging and spectroscopy, etc.)

COURSE POLICIES:
Lectures
Class lectures will be held on TR at 4:00-5:45 PM (Van Leer W200 for on-campus students).

Homework
Homework assignments will be usually issued each week and will be due the following week (unless there is an exam that week). Each homework assignment is due at the beginning of the class corresponding to the due date. Late homework is accepted, but there will be a 20% penalty for each day. Collaboration on the homework problems is allowed and encouraged. However, each student must write the solution alone.

Exams
There will be two exams and one comprehensive final exam. Tentative midterm exam dates are June 23, 2016 and July 21, 2016. All exams will be closed book and notes. However, a one-page formula sheet will be allowed (three pages will be allowed for the final exam). Calculators are not to be used in the programmable mode on the exams.

Grades
Grades will be calculated based on the following two formulas, and the better grade will be considered. Note that there is a 5% extra credit when homework contribution is included.
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List of Suggested References for ECE 3025


3. Electromagnetics, by J. D. Kraus, McGraw-Hill.

