EE 172

SAN JOSE STATE UNIVERSITY
Department of Electrical Engineering
Spring 2007

EE172 - Introduction to Microwave Engineering

Instructor: Dr. Ray Kwok
Lectures: Tue & Thur 7:30 pm – 8:45 pm (ENGR 401)
Office Hours: Mon, Wed & Fri 9:30 am – 11:30 am (location TBA)
Online Info: www.engr.sjsu.edu/rkwok/
Email: rkwok@email.sjsu.edu

Course Description:
This course is an introduction to Microwave Engineering. It is a continuation and application of EE140 and EE142. The course will cover the engineering approach to the electrodynamic problems and their applications. Design of simple microwave components, CAD and computer simulations, and well as hands-on experiments will be included.

Prerequisite:
EE 142 or equivalent. Familiar with Electromagnetic Fields and Waves, Transmission Line Theory, Smith Chart and Waveguide. Some review will be provided.

Text: Microwave Engineering, David Pozar (Wiley & Sons)

References:
Foundation for Microwave Engineering, Robert E. Colin (McGraw-Hill)
Fundamentals of Engineering Electromagnetics, David K. Cheng (Addison-Wesley)
Introduction to Electrodynamics, David J. Griffiths (Prentice Hall)
Introduction to Electromagnetic Fields & Waves, Lorrain & Carson (Freeman)

Tentative Topics:
Tentative topics is listed in my web site under EE 172. The list is intended to help students to prepare and review lectures, and not to encourage students to miss classes. Students are responsible for any material presented in lectures even though it might not be on the list.

Grading: Distribution of points (homework 10%, quiz 10%, 2 mid-term each 25%, final 30%)
Final Letter grades will be assigned roughly according to the following percentage of maximum points earned:
A  85% or above
B  70 - 85%
C  55 - 70%
D  40 - 55%
F  below 40%

Calendar:
mid-terms (tentatively March 22, April 26 Thursdays)
final exam: May 22 Tue, 7:45 - 10:00 pm

Relationship of the course to the program objectives:
This course supports the achievement of the following objectives (numbers in parentheses refer to specific ABET criteria):
(3.a) an ability to apply knowledge of mathematics, science, and engineering
(3.c) an ability to design a system, component, or process to meet desired needs
(3.e) an ability to identify, formulate, and solve engineering problems
(3.k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
(3.l) one or more technical specialties that meet the needs of Silicon Valley companies.
(EE.3) a knowledge of advanced mathematics such as differential equations, differential and integral calculus, linear algebra and complex variables.

**Computer Usage:**
Some homework problems require computer simulation and calculation. Any commercial math software (such as MathCad, Mathematica, MathLab), or any programming platform (C++, Fortran, Basic) will be useful. Spreadsheet (such as Excel) will be sufficient, but not efficient. Students are expected to spend some time in the computer lab to learn the Microwave Office software.

**EE Honor Code:**
The Electrical Engineering Department will enforce the following Honor Code that must be read and accepted by all students.
“I have read the Honor Code and agree with its provisions. My continued enrollment in this course constitutes full acceptance of this code. I will NOT:

1. Take an exam in place of someone else, or have someone take an exam in my place
2. Give information or receive information from another person during an exam
3. Use more reference material during an exam than is allowed by the instructor
4. Obtain a copy of an exam prior to the time it is given
5. Alter an exam after it has been graded and then return it to the instructor for re-grading
6. Leave the exam room without returning the exam to the instructor.”

**Measures Dealing with Occurrences of Cheating**
1. Department policy mandates that the student of students involved in cheating will receive an “F” on that evaluation instrument (paper, exam, project, homework, etc.) and will be reported to the Department and the University.
2. A student’s second offense in any course will result in a Department recommendation of suspension from the University.

**Academic Integrity Statement:**
From the Office of Student Conduct and Ethical Development: "Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University's Academic Integrity Policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development." The policy on academic integrity can be found at [http://sa.sjsu.edu/student_conduct](http://sa.sjsu.edu/student_conduct).

**Disabilities:**
If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities register with the Disabilities Resource Center (DRC) to establish a record of their disability.

**College & Department Policies:**
You are responsible for understanding the policies and procedures about add/drops, academic renewal, withdrawals, incompletes, classroom behavior, and other policies described in the catalog. Please read your catalog thoroughly.

For More Information Contact:

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