

EEE 211

MICROWAVE ENGINEERING

FALL 2009

Instructor : Dr. Preetham B. Kumar
Office hours: : MW 11 am – 1 pm (or by appointment)
Office : RVR 5006
Class hours : Tues./Thurs. 1.30-2.45 p.m, Eureka Hall 113
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Prescribed Text : 'Microwave Engineering' by D.M. Pozar,
John Wiley & Sons, Inc., Third Edition.
References: 'Advanced Design System', Agilent-EEsof Manual
Mathworks: MATLAB Manual

Course Grading

Midterm I: 20%
Midterm II: 20%
Finals: 30% (comprehensive)
Homework: 10%
Projects: 20%

- **Project 1**: Design, simulation, fabrication and testing of broadband matching circuit
- **Project 2**: Design, simulation and/or fabrication and testing of microwave filter circuit

All exams are open text book (no notes).

Class Schedule for Fall 2009

WEEK	BEGINNING	TOPICS	CHAPTERS
1	08/31/09	Review of Maxwell's Equations Propagation & Scattering	1
2	09/07/09	Transmission Line theory	2.1-2.4
3	09/14/09	Transmission Lines: Waveguides Transmission Lines: Microstrip and Stripline	3.1-3.5 3.7-3.8
4	09/21/09	Microwave Network Analysis:	4.1-4.4
5	09/28/09	Narrow band matching: Lumped, distributed matching	5.1-5.4
6	10/05/09	Review and Midterm I	
7	10/12/09	Broadband matching Binomial transformers Chebyshev transformers Tapered lines	5.5-5.8
8	10/19/09	Project 1 lab	
9	10/26/09	Power Dividers	7.1-1.3
10	11/02/09	Directional Couplers	7.6-7.8
11	11/09/09	Review and Midterm II	
12	11/16/09	Microwave Filter Design	8.1,8.3-8.6
13	11/23/09	Project 2 lab	
14	11/30/09	Microwave Antenna Fundamentals Microstrip Antenna Design	12.1 Handouts
15	12/07/09	Review	
16	12/14/07	Finals Week	