

Instructor: Dr. Jim P. Zheng Room 350 Lecture Hours: TR 2:45-4:00
Office Hours: TR 12:30-2:30
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Prerequisites: EEL 3300 (grading C or better)

Required Textbooks: Mark N. Horenstein, Microelectronic Circuits and Devices, 2nd ed.,
Prentice Hall, 1996.

Course Objectives:

At the conclusion of this course, you should be able to

1. derive the differential- and common-mode gains for differential amplifiers, design and analyze dc bias network. (Chapter 8)
2. describe the frequency response using Bode representation, and identify high- and low-frequency capacitors and frequency limits in amplifiers. (Chapter 9)
3. classify four different basic feedback amplifiers, and determine the amplifier gain, input and output resistances. (Chapter 10)
4. determine the biasing condition, overall voltage gain, input and output resistances for multistage amplifiers, and derive the power dissipation of power amplifiers. (Chapter 11)
5. classify and analyze active filter made from op-amp, and determine the oscillating frequency for basic oscillators. (Chapter 13)
6. *determine the voltage relationship between input and output signals for basic logic circuits. (Chapter 14)

Grading: Two Examinations: 50% (25% from each exam)
Homework: 10%
Final Examination: 40% (a comprehensive exam)
Attendance and Quizzes: 5% (bonus points, no credit will be awarded if one missed more than 3 lectures)

Grading scale: **A: >90%, B: 80-89%, C: 65-79%, D: 50-64%, F: <49%**

These breakpoints may be lowered slightly depending on overall class performance.

Policy Statements:

- Attendance is mandatory.
- Homework is due at the beginning of class.
- The general policy is no makeup exams and quizzes. In the event of an excused absence, you must notify the instructor prior to the exam to discuss proper procedure.
- There is renewed emphasis on the Honor Code. Violation of this code can result in course failure and/or dismissal from the College of Engineering.
- * If the time is permitted.