EECS 215 INTRODUCTION

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Winter Semester, 2010

Outline

- Important Dates
- Grading
- Late Policies
- Keys to Success in 215
- Labs
- Introductory Comments
- Begin Technical Material

Important Dates

- Last Day to Drop a class without a "W" Tuesday, January 26th, 2010
- **Exam 1: Friday, Friday Feb. 19, 9:00-10:30 AM**
- Last Day to Drop without a Petition (*very* hard) Friday, March 19th, 2010
- **Exam 2: Friday, Friday Mar. 26, 9:00-10:30 AM**
- **Final Exam, Monday, April 26, 7:00-9:00 PM**

Grading

- Labs 20%
- Problem Sets 15%
- Quizzes & In-Class 10%
- Midterm Exams (2) 30%
- Final Exam 25%
- Class will not be graded "on the curve." Historically, average Class Grade on 4 pt Scale ~2.85 (B/B-)

Late Policies

- Problem Sets May Not Be Turned In Late For Credit Under Any Circumstances
  - Medical or other legitimate reasons remove that particular problem set from your overall average
  - The Lowest Homework Score Will Be Dropped
- If You Have to Miss an Exam
  - I Need *Real* Documentation As To Why
  - Must Actually Be A Serious Issue (Medical or Close Family Member Crisis)
  - I Don't Like E-mailed Excuses only Hours Before An Exam
    - It is likely that these e-mails will not be answered
    - Any considerations due to crisis in the last hours will be addressed on a merit basis after appropriate documentation is supplied

Special Circumstances

- If You Need Special Accommodations for Exams, You Must Submit The Appropriate Letter From UM Services for Students With Disabilities At Least 1 Week Prior To The Exam
- If You Are On A UM Athletic Team Or Have Another UM-Related Reason For Schedule Irregularities, Written Notice And Appropriate Documentation Is Needed Within University Guidelines

Keys to Success I

- Stay Up to Date
  - Each Incremental Concept/Method Is Not Hard But If You Get Behind It Will "Snowball" On You
- Come to Class
  - Helps Keep You Up to Date
  - You or Somebody Paid For It, So Why Not?
  - I Will Give A Small Number of <u>Unannounced</u> Quizzes and Other In-Class Participation Events for the 10% This Semester

Keys to Success II

- Do the Problem Sets. Do as much as you can on your own, then:
  - Seek help in collaboration with fellow students
  - GSI's, IA's, Professors
  - Always do the problem sets even if you can't finish 100%
  - Compare your solutions, both methods and final answers to the posted solutions (*keeping a copy of your work is suggested*)

Keys to Success III

- Before an Exam, Do One or More of the Recent Exams In A Real, Timed Situation Without Looking at the Solutions
  - Honestly Grade Your Own Performance
- Qualitative Understanding Without A Demonstrated Ability to Quantitatively Execute Will Not Be Sufficient
- Keep Up With Labs, Learn and Have Fun, But Don't Expect the Your Lab Scores To Save Your Grade

Labs

- Labs begin week of Jan. 18
  - Do your pre-lab in advance
  - Come to lab on time and prepare (GSI/IA and room time is limited)
- See Dr. Ganago's notes on lab report preparation in the lab manual.
- Room 1016 EECS Bldg.

Introductory Comments

- The major objective of 215 is for you to *understand* how linear circuits work and how to analyze them
  - The objective is ***NOT*** to train you in a set of procedures that you apply through pattern recognition. Computer software already exists to do this and it's cheaper than you!
- While many interesting applications require nonlinear as well as linear circuits, our understanding of linear circuits provides an outstanding basis for understanding all electrical systems
- The tools of linear circuit analysis are applied in other linear systems analysis problems, including mechanical, fluidic, and thermal systems.

Introductory Comments

- This class will use relatively few basic concepts and rules, but they must be used correctly and logically.
  - Some find this good, but remember that E&M uses only 4 equations (Maxwell's) and (non-relativistic) quantum mechanics uses only one (Schrodinger's). How many statement types are there in C++?
- All the problems assigned for homeworks and exams will have one and only one answer (and often you can compute it exactly). Usually, it is possible to check your final answers to see if you satisfy all the circuit rules (If you do, you know the answer is correct. If you don't, you know you are not right).

Introductory Comments

- Exams will be constructed so that most points come from correctly specifying the equations that you must solve for the final answer. Mistakes in the setup indicate problems in physical understanding. Relatively few points will be assigned for final numerics.
- However, calculators which perform complex number & matrix calculation (ex. TI-89) will be allowed on exams. Sometimes it is advantage to be able crunch the numbers, find an error, and then go back. However, random button pushing will never get you there!