Quote of the Week: Wes Hayward “The simulation is the greater experiment”

Tasks for this week:

Introduction to the uses of current in circuits with several transistors.

Intro to PSU FR4IC project.

Study Chapter 3

Study Chapter 8 pages 349-356

Next week--frequency response. Quickly read through Chapter 4

Check Concept Inventory--Course Outcomes:

Fluency with diode, BJT and MOS structures and models.
Design using real devices.
If you can’t fix it, feature it: design using device non-linearity.
Fluency with the basic analog building blocks: bias, feedback, v to i, output.
Single-ended to differential circuits and techniques
Familiarity with the use of a circuit simulator to support analog IC design
Introduction to Analog Integrated Electronics Projects
Ownership of a basic project in personal analog design portfolio.

Homework exercise

Simulated technical interview: sketch current mirror, active load, common source, common gate, diff pair circuits on a blank sheet of paper and explain how each works, expected gain, etc. in a few sentences. Use primitive models (just voltage controlled current sources and resistors) and discuss bias circuits. Turn in 2 page summary on Monday October 28.

In-Class Midterm exam Wednesday November 13