ECE 421/521 Study Guide #4 19 October 2015

Topic: Current Mirrors and Active Loads
Reading assignment Gray, Meyer et al. Chapter 4 pp 251-340 in 5th edition

Tasks for this week:

Continue development of a primitive op-amp design to drive a high-power audio output stage.

While reading, consider simplifications/complications that may be made when gain does not have to extend to dc.

Circuit schematics and simulation tutorials will be presented in class.

Review the course outcomes listed on the syllabus and check that you are on a path to achieve them.

Homework--next two weeks. Sketching and simulating a primitive op-amp design
1. Simulate a differential pair using transistors of your choice. 2N3904 suggested.
2. Expand diff pair into a minimalist op-amp with 5 transistors.

Using the Textbook and other resources--Layers of the Onion metaphor.

Read: Quick overview of material to acquire basic understanding
Study: Understand the basic concepts, math models, and expressions
Practice: Do the homework problems
Reference: Create new circuits using the text material as reference

Midterm exam date:

In Class November 2. Closed book, no notes, no calculators.

Final exam content:

Standard Analog IC Design Interview Questions.