ECE 422/522 Study Guide #10 March 11 2013

Tasks for this week:

Prepare for the Final Exam, Monday March 18 5:30 - 7:20

Final Exam Portfolio--to be turned in at the beginning of the Final Exam

The purpose of this exercise is to prepare you for the closed-book closed-note final exam, and to provide you with a concise packet to review before a technical interview for an Analog Design position. Interviews are also closed-book.

Select 3 or 4 topics from the list of course outcomes below, and demonstrate your competence in a short report of no more than 6 pages total, including simulation results, with some relevant commentary on practical limitations, device models, and anything else of practical significance that you learned this quarter.

In addition, you are encouraged to identify any topics you would have liked to cover in more depth, and note the pages in the textbook that you would read to review those areas before an interview.

ECE 522 Course Outcomes

Fluency with the use of diode, BJT and MOS structures in basic circuits
Understanding of device models
Catalog of familiar back-of-the-envelope circuit topologies for amplifiers
Understand the language and basic operation of multipliers and modulators
Quantify the noise contributions of various structures on an IC
Familiarity with the use of a circuit simulator to support analog IC design
Fluency with frequency response
Fluency with feedback techniques

Next Graded Exercise: Final Exam in class Monday March 18 5:30-7:20 p.m.

The final exam will be based on the outcomes stated above, the homework, lectures, and midterm exam. It will be closed book, and have three different design questions. You will choose only one of the three, and work on it for two hours, demonstrating the depth of your understanding of Analog IC Design. The goal is design of a working circuit on paper, ready for simulation, testing at the prototype bench, and fabrication.