EEL 3304 Fall 2007 Final Exam Study Guide

• EXAM details:
  – **Date:** Thursday Dec. 13, 2007
  – **Time:** 12:30PM to 2:30PM
  – **Location:** LAR 310 (same classroom)

• What to bring?
  – Cheat sheets: *6 pages* (back and front)
  – Calculator, pencils, erasers

• Number of questions?
  – About 5 questions (see sample final exam)

What to Study?

• **Homeworks, Quizzes, Midterm, Lecture Notes, Labs, textbook** (Chapters 1.1-1.6, 2.1-2.8, 3.1-3.5, 4.1-4.10, 5.1-5.9, 6.1-6.3, 7.1-7.5), **sample exams**

• **General topics:**
  – Ideal and non-ideal opamps
  – Single stage amplifiers (MOS and BJT)
  – Differential Amplifiers (MOS and BJT)
  – Current Mirrors (MOS and BJT)
  – Multistage Amplifiers (MOS and BJT)
  – Frequency Response

• **Skill sets:**
  – **DC Analysis:** solve for DC solution, determine nodal currents and voltages, etc
  – **AC Analysis:** determine small signal parameters, input and output resistances, gain, CMRR, etc
  – **Large signal analysis:** input and output voltage swings, power, etc
  – **Frequency response:** gain vs. frequency, bode plots, single time constants, unity gain, 3dB, etc
  – **Thevenin and Norton equivalents:** used to simplify analysis

*Note:* The final exam will emphasize these topics. However, additional material covered in class may also be included.