FINAL EXAM – GUIDELINES
Friday, May 10; from 12 to 3:00 PM

STUDENTS WITH LAST NAMES BEGINNING WITH ALPHABETS ‘A’ to ‘R’ MUST BE PRESENT IN HILL 114 & THOSE WITH ALPHABETS ‘S’ to ‘Z’ MUST BE PRESENT IN SEC 205.

- The topics covered after the two midterm exams will be emphasized although the other topics will reflect in the final exam.

- I am thinking of having the same style of final exam for some problems as that of Dr. Orfanidis with some modifications. Dr. Orfanidis emphasizes five or six big problems. I usually subdivide even a simple problem into different parts so that you can hopefully see what needs to be done right away. Look at the general guidelines, review sheets and the old exams given in the website of Dr. Orfanidis (www.ece.rutgers.edu/~orfanidi/ece346). If you understand and do all the old exams that pertain to year 2000 on the website, you can do at least (if not more) 50% to 60% of the upcoming final exam.

- Both theoretical deductions (proofs) as well as numerical problems will be present in the final exam.

- Basic topics emphasized but not limited to are as follows:
  - Sampling and its effects.
  - Input/Output calculations by convolution and transform methods.
  - Sinusoidal Steady State and Transient Analysis.
  - Frequency Response.
  - Sample by sample processing and batch processing.
  - Time constant.
  - Poles and zeros; Frequency Response from pole-zero plots.
  - Filter realizations, input and update equations.
  - Preliminary filter design based on pole-zero placement.
  - Spectral calculations, frequency resolution.
  - Fourier Series Interpretation of DFT.
  - DFT and its properties; DFT and IDFT calculations.
  - FFT algorithm.
  - Formal design of filters (Chapters 10 & 11: At this stage I do not know how much we can cover)