ECE NEWS 9-13-05: ECE323 Fall 2005

Advise on writing prelab reports

1) Organize your prelab report into sections and subsections corresponding to the items mentioned in the "boxes" in the project description. Use section headings to organize your document. Remember to check what is in the boxes carefully, so you include all items mentioned there in your report.

2) In describing your design procedure, don't separate your descriptive writing from your calculations and equations. Write a couple of sentences about what you are doing, then the relevant equations and calculations, then another sentence or so describing what the result shows and what the next step is, then more equations. ..etc. We want to know how you reasoned when you came up with your design and when you did your calculations and simulations. Write only the number of pages specified for each item in the “boxes”. Writing a much longer description does NOT increase your score!

3) Include PSPICE printouts that back up any results you use to respond to the "boxes". This includes a printout of the DC analysis that PSPICE gives.

4) You should be comparing hand calculations and PSPICE results for only your final design. Don't calculate data for your initial design, change the design and then compare simulations of the second design to calculations' of the first design. In project 1, the hand calculations and PSPICE will not agree very closely. If they don’t try agree, try to explain this. In later projects it is possible to get much closer agreement, and you will be asked to do detailed comparisons.

5) Label all graphs completely.

6) If at all possible turn in a typed report. If you do turn in a handwritten report, make sure that it is neat and READABLE.

7) **Each individual student turns in her/his own report. See the syllabus for more details about the consequences of breaking this rule! We will specifically be checking that ALL PSPICE output you turn in has your own name on it. You can insure this by including your full name in the file name for you PSPICE design. No nick names!**

8) **Organization of report, details, feedback on some reports last year:**

Let's all try to conform to the items below:

Start with a cover page with the name of the project, your name and the date you submitted it.

Divide the report into sections with clearly emphasized headings. The sequence should in general follow that of the "boxes" in the project description. Possible Sections may be (this is only a suggested division into sections; this one applies better to Project 2)

INTRODUCTION

HAND CALCULATIONS AND DESIGN OF THE BIAS POINT OF THE AMPLIFIER (OR WHATEVER THE REPORT IS ABOUT)

Break this into **sub-sections** for the different parts of this task as specified in BOX 1.

It is good to summarize the design that you came up with at the end of this section.

SIMULATIONS WITH PSPICE: DC DESIGN

Use a separate sub-section for each task, i.e the one in BOX 2, AND BOX 3, fill in the appropriate tables, etc.

SIMULATIONS WITH PSPICE OF THE AC PROPERTIES OF THE AMPLIFIER

Again break this into several subsections, basically one for each box. .
Some material may be placed in an Appendix, then indicate this, and number the appendices, etc.

CONCLUSIONS

A)Give each plot a caption.

B) Paginate the entire report!!

C) PSPICE. You will often need to include a table summarizing and comparing the results from hand calculations, PSPICE, and the spec's . One of the reasons this is a useful task is that you need to not only run the PSPICE program and plot the results (which you by and large did well), but also

Describe HOW you ran PSPICE

Analyze the results.

D) When you run PSPICE and ask it to indicate DC voltages in your circuit, these may turn out to be the initial values, and that's why they are very small. So if you are asked to note DC voltages in a circuit, make sure they apply to the situation you want.