Chapter 0S

Preparing for Class 2: some tips

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What to do for Thursday, September 11.

We aren’t always going to list all your duties in one place, but to get you started, we thought it wouldn’t hurt to do it once.

0S.1 Reading

Immediately, you face a crisis: to buy or not to buy the fat text, Horowitz & Hill. We don’t require this book, and it’s expensive, so we expect few will buy it. But it is a very good and useful reference. Proof of that fact is its sales volume, on the order of 1 million copies. Probably most labs, and a great many engineers keep this book on hand. You could, too.

Assuming that you don’t have the text, then your reading is limited to the xeroxed notes that we hand out (but this is a lot of paper: perhaps 400 to 500 pages).

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1Revisions: cut refs to AoE reading, use headerfile and sections (7/14); add suggestion ”come in on Sat. (9/13); amend to reflect likely absence of Text (9/12)
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For the second meeting, then, we seem quite unfairly to be asking you to read two assignments—unless you were amazingly-forehanded, and read before our first meeting. Two assignments? Well, the first one is pretty easy. That’s our defense. The second is not easy, and your real task for the second class is to begin to get familiar with RC (resistor-capacitor) circuits. Don’t linger on Lab 1’s reading. The only important and non-obvious issue there is the Thevenin model, which we hope Class 1 and Lab 1 will have begun to make intelligible.

0S.1.1 Study Strategies: How should you proceed, given all this material?

You may already know the ill-kept secret that Harvard students usually don’t do all the assigned reading. Teachers make themselves feel rigorous and thorough by writing out enormous reading lists. Students allow us this good feeling by not revealing to us that they know better than to read all that stuff. Teachers cooperate by neglecting to ask about the fine points.

The trick, of course, is to select intelligently what to skim or ignore.

So, here is a possible—and pretty-thorough—way to get ready for the second class:

**Reading**

skim Lab 2: this will give you a fast impression of what we teachers think are the most important circuits covered in this day’s reading.

skim Class 2 notes: these notes are long and chatty and the actual class will sound a good deal like these notes (since the fellow talking is the fellow who wrote the notes). So, you need not pore over these notes. Read them fast, noting in the margin which passages baffle you.

look at the list of supplementary materials (reading caps, “…trying for an intuitive grip,” etc.). Don’t feel obliged to read any of this. Read through an item if it promises to treat an issue on which you’re somewhat puzzled.

worked example: probably you can postpone these until it’s time to do a homework exercise. The level of detail is too much to be manageable just for class preparation.

**0S.2 Written Work**

try the homework: do the problems that come easily; postpone the ones that seem hard.

scan the “worked examples”: These appear near the end of each day’s dose of materials. See whether these resemble any of the homework problems that you found difficult. Here’s where the worked example can become really useful. Recall that the person who wrote the worked examples also wrote the homework questions, so similarities are frequent.

come in to the Saturday session (2-5 p.m.) Mark and Phil are extremely knowledgeable, helpful and friendly. You’ll also meet classmates wondering about the same HW questions.

talk with a classmate: talk about the problems you found difficult. The Saturday session offers a perfect opportunity. Next best might be to get a phone number for your lab partner, and perhaps others as well. Then call one of these classmates. Talk about your classmate’s clever solution to the problem you got stuck on—’talk about’ is a bit different from ’copy.’

e-mail us for help: we like questions before a homework is due. A question doesn’t mean you aren’t smart, or that you’re not playing fair. A question means that you’re actually working on the course instead of
sunbathing.

Often your question will raise an issue that’s troubling other students as well. If you email such a question, we’ll email our reply to all the students (keeping the questioner anonymous, unless we’re trying to glorify you for asking a good question). In this way, you can do a public service by asking questions!

Days later, we still like questions, but at that point you can no longer get full credit for writing down the answer. Also, new topics come so thick and fast in this course, that old questions soon become stale. You’ll be worrying about transistors, next week, so don’t save your RC questions till next week.

(Studtip sept14.tex; July 12, 2014)