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### Administrivia

- Grade summaries sent by e-mail.
- Reminder: Homework 10 due Friday.
- Reminder (as if you needed one!): Final next Monday. Review sheet on the Web.
- Final deadline for turning in homework (including revisions) will be the next day (12/11) at 11:59pm.
- Office hours as announced in e-mail: "Open lab" 12/05; office hours 12/10 and 12/11. Also e-mail is usually a good way to reach me.
- Solutions to all quizzes online; sample solutions to some homeworks. I'll post sample solutions to other homeworks soon.

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### Exam Review

- (Topic by topic through review sheet, briefly.)

### Course Recap

- Course is an “introduction to programming.”
- Ideally, a first course would focus more on ideas of programming than details — except that, in the words of a colleague  
“Programming is not a spectator sport.”  
so we have to choose a programming language, and an environment, and then it’s difficult *not* to get caught up in the details.

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### Course Recap, Continued

- Course intended as introduction to programming for students majoring in Engineering Science, taught in a language acceptable to the department. Exposure to Linux command-line environment considered a plus.
- Choice of examples and assignments meant to slant toward those of use in STEM fields.
- Some material normally covered in a first course for majors omitted/skimmed.

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### What I Hope You Got From This Course

- A basic understanding of what programming is — expressing a problem and its solution as “an algorithm” and turning that into code.

In particular I tried to make at least some assignments not-totally-trivial, to give a sense of what you can do with programming skills.

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- A basic knowledge of C and its quirks.
- Exposure to Linux command-line tools, including `gnuplot`.

### “Why C?”, Revisited

- C would not be most people’s choice as a beginning language — must learn both programming basics in general and C quirks. (But our department used it in CS1 at one time!)
- But traditionally it’s a “universal language” with implementations on pretty much every platform (though that may be changing?). So you may need it at some point, particularly for “embedded systems” work.

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### “Why Not C”

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- On many occasions I've mentioned “more-recent languages” as being easier to use, safer, etc. Also many of them include extensive standard libraries that support GUIs, graphics, networking, etc., etc.
- In my thinking, for general-purpose/application programs one of these is the way to go. Popular choices include C++, Java, and Python (particularly the latter, for people outside CS). We like Scala but it is not (yet?) as widely-used.
- Does that mean it was useless to learn C? I say no! good to have in your “bag of tricks”, and once you know *one* programming language, the next is easier, and the one after that is easier still . . .

### Minute Essay

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- None really — just sign in (unless you have parting remarks?).
- And best wishes for a successful end of semester and a good holiday!