

## Tips for CS 105 students

- *Schedule one day a week with no 105 work.* Avoid burnout.
- *On every other day, work 60 to 90 minutes.* Research shows that “brief daily sessions” roughly *double* your productivity compared with knowledge workers who set aside large blocks of time two or three times a week.
- *Spend at least half your time at the whiteboard.* The hard part of 105 is understanding the ideas and techniques. If you get the ideas, the code is easy. If you’re not certain about the ideas, code can be very hard.

If you’re not spending at least half your time at the whiteboard, you’re probably spending time fighting with code. This is time that you don’t have to spend, and it’s time during which you’re learning very little. It’s time *wasted*. Spend the time at the whiteboard instead.

- *Have a systematic approach to programming.* If you haven’t already developed a systematic approach, use ours.
- *When you are at the keyboard, compile insanely often.* Especially as you get into advanced work with ML, the compiler can help you a lot.
- *Don’t work more than two hours without a break.* There’s only so much your brain can do at once. On any given Sunday, you may have four hours available, but you can’t count on being productive for four hours. And unlike projects in certain other courses which shall remain nameless, CS 105 projects rarely benefit from marathon debugging sessions.
- *Become part of a learning community.* CS 105 is not just about you, lecture, and homework. It’s not even about you, your programming partner, and homework. CS 105 is about hard ideas.

To succeed in 105, get yourself connected to a group of other learners. Share insights. Share time at the whiteboard. Find out what’s hard and what’s easy. Think of new ideas!

Those who habitually work alone work long hours for poor results.

- *When getting ready to quit for the day, take a look at tomorrow’s problems.* CS 105 is an “insight” class, and while you’re doing other things, your subconscious mind can be thinking about problems.
- *Don’t try to read everything.* Let the homework, especially the comprehension questions, guide your reading.
- *Before you tackle the reading, know what’s on the homework.*