CS 320
Fall 2025

Computer Architecture
Syllabus (It's All a Lie)

Professor Mark Bailey
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Office hours: Monday 2:00–3:30, Tuesday 2:00–3:30, Wednesday 1:00–2:00, others only by appointment.

Course Description. In the computer science courses you've taken so far, the only machine you had to deal with is the "virtual machine" that you see when you write a program. As far as you needed to be concerned, the machine was a Python virtual machine—you never had to deal with the details of memory organization, instruction formats, or circuit design. Of course, we all know that there is a real machine that, somehow, executes the Python byte code that the compiler generates from your Python source code. In this course, we'll discuss the design principles that apply to the construction, organization, and understanding of the physical, rather than the virtual computer.

Readings. There is one required reading for this course:

- Course webpage: http://tinyurl.com/cs320-fall25

Evaluation. At the end of the semester, I will compute an average using the weights below. Failure of any parts is grounds for failing the course.

- Paper Annotations (50%). For each paper, you will be responsible for submitting paper annotations/-summaries.
- Paper Presentations (30%). Each of you will be responsible for leading class discussion of research papers.
- Final Essay (20%). The final experience will be a technical essay. The essay is due at the scheduled final exam time: Friday, December 19, 2025 at 9:00 a.m.

I will use this average, as well as your level of intellectual engagement and my observations of your performance throughout the semester to inform my decision on your course grade. Therefore, your grade may be higher or lower than the average might suggest.

You may appeal grading decisions for individual assignments no later than one week after I return the assignment to the class.

Late policy. Late assignments will not be accepted without my approval *prior* to the due date.

Extensions. I don't think extensions will be useful in this class because you perform all graded work during class. Should you feel that an extension is appropriate for some reason, I encourage you to discuss it with me.

Attendance. I expect you to attend every class. I will excuse you only for college-sanctioned activities; you must let me know about such absences as soon as you are notified. I expect you to arrive to class on time. Chronic tardiness (more than one) will result in a significantly lower final grade.

Collaboration. For each assignment, you may work by yourself or with one other student. If you work as a pair, you must submit your work together. You may choose a different partner (or to go solo) on each assignment separately.

Use of automated assistants. The use of any automated assistant (Github Copilot, Chat-GPT, etc.), whether it uses artificial intelligence or not, is not allowed for graded work in this class. Any violation of this policy will result in failure of the course. For ungraded work in this course, I strongly encourage you to resist its use since it eliminates any learning potential of the assignment.

Publishing your work. You are not allowed to publish your work for this course during the semester or afterward. Publishing is using any technology or process that makes your work available to anyone else. This includes, among others, webpages, Google Drive, Facebook, GitHub, or any other technology that enables others to acquire your work. Making your work available to others is a violation of the honor code and will result in failure of the class and may be applied retroactively.

Modern technology policy. Cell phones and similar electronic devices are not permitted in the classroom, laboratory, or professor's office. (They must be neither seen nor heard.) Personal laptop computers may not be used in class or lab without special permission. Audio, video, or image recording of lectures, the white board, or projection screen is not allowed. Ear-buds/headphones are not appropriate.

Department laboratories. The Department of Computer Science provides laboratory space, computer equipment, and software for your use in this course. You may only use the hardware and software that you have been authorized to use. We expect you to treat all equipment with the utmost respect and care. Modifying the configuration of any equipment without authorization is prohibited. Please report problems with labs or equipment to our department director of laboratories, David Deeley (Science Center 1005, `ddeeley@hamilton.edu`, x4452)

The Science building is the best place to do computer science work. Use the space outside of the Science 2013 suite, use the 2017 classroom anytime a class is not scheduled between 9:00 a.m and 4:00 p.m., bring your laptop and work in the Science atrium, or use the Introductory Computer Science Laboratory (Science Center 3040) when it is open.