Policies

Official Academic Guide Conduct Policies

The subjects covered in this course include C and assembly language programming, translation of high level programs into machine language, computer organization, cache performance measurement, pipelining, CPU design, warehouse-scale computing, and multicore.

Prerequisites

CS61A and CS61B (or equivalents). CS61B requirement can be bypassed if you have solid experience with C-style programming.

Textbook and Notes

Our textbook is the 6th edition of Patterson and Hennessy's Computer Organization and Design RISC-V Edition (ISBN 978-0-12-811731-6 (CS61C). We are also requiring The 2 Programming Languages Second Edition by Kernighan and Weirich (TWO), and will reference its sections in the reading assignments. Other books we will use are The Cuda Handbook by Farber and Wilt (CUDA) and Parallel Computing for Data Science by Rose (PCDS). We will be using the Supercomputer as Computer Architecture in the Design of Warehouse-Scale Machines (SWC), which is freely available online here.

Teaching Plan

Attacks on John Denver and the CS61A team, as well as Satan Fallen of the College of Engineering for their version that the discussion was based on.

In Fall 2020, CS61C is planning to be a complete game to better support students and encourage participation during the difficult conditions of the pandemic.

Guiding Principles Moving Online

Equity: Instructional decisions are made with respect to how study groups and work together to understand course material, how students learn best in a virtual world and what should be done to ensure the integrity and ethical conduct and of utmost importance to the College of Engineering and at UC Berkeley, especially with respect to students who are at a disadvantage due to the transition to remote instruction. Equity means that we will not curve at the end of the course so that you don't have to feel the pressure of having to do well in a class in a fair competing against an absolute scale and you can all strive to receive grades in grades though, we might need to make some adjustments to the scale. We will also make the performance SLOTS more rigid, so that everyone has a fair shot at the grade they deserve.

Flexibility, Community: Online classes sought during a time of anything other than a pandemic, and a worldwide pandemic need to be flexible to support students in different situations, and in different time zones. They need to have a way that the students can get to know each other, learn from each other, and study with each other. We will be using Zoom breakouts, Piazza, and Discord to facilitate this. Students will also have the ability to create their own Piazza and Discord groups, and the Teaching Assistants will be available to use a student-run Slack rooms when more formal or informal groups or homework. We believe we have both of our classes have been successful in this.

Spontaneous and Asynchronous Learning: Research and practical evidence has shown that students who keep up with the material every week do better than students who fall behind, start projects late, and try to cram. Students who are able to participate in synchronous learning are able to ask questions in real time. Unlike F20 – F21, that either discourage by a challenge or a discussion block, or force students to do it synchronously. However, you will not be penalized for being in a time zone that makes that difficult, and you will be able to watch the recordings and ask questions on Piazza. Discussions and Labs will be recorded, and shared with you to partner with video-on, but we will have many times throughout the week available for you.

Here's the overall summary of all the elements of the course (and how it used to be done):

	Fall 2019 Face-to-Face	Fall 2020 Online
Lecture	Twice a week, 2 hours each, in-person. Slides, videos, and notes posted after class.	Twice a week, 2 hours each, live streaming on Zoom. Slides, videos, and notes posted after class.
Discussion	Once a week, 1 hour, in-person. Students work on worksheets in groups.	Twice a week, 1 hour each, live streaming on Zoom. You and your partners do them together on your own zoom rooms or in Lab, and go to a TA's breakout room. This is the only required TA interaction, and it is meant to be a time for staff to check in with you about how you are doing in class, as well as to help you with the material. Students will be able to ask questions to their TA in breakout rooms or ask questions in Lab. We will provide a Google Doc for each breakout room to keep a record of appointments also if you are someone that you do not know signed up for a slot, so that the TA can see what you talked about with the previous student. Students can check your work, BUT only if you and your partner have a full score on the current lab to get credit.
Office Hours	Three live 1 hour sessions every week (worksheets, projects, exams).	No longer have regular group portions and instead having group OH which are spread out over the 6 days of the week of the projects. They will be held on Zoom.
Project Partners	We are no longer having project partners and instead having group OH which are spread out over the 6 days of the week of the projects. They will be held on Zoom.	
Exams	Twice a week, 1 hour each, in-person. Students will be given a 2 hour slot, but only need to use 1 hour. Exams are open book, open notes, open laptop.	**Quest**, 1 hour worth of work **Midterm**, 2 hours worth of work **Final**, 3 hours worth of work All exams except Quest are open book, open notes, open laptop, open everything. Exams are given a randomized exam and 24 total hours to complete it.

Exams

There will be one quiz, one midterm, and one final exam, delivered through the Pandamonium system.

- Quiz: 9/10 (Schedule) 11:59PM PT. Covers up to and including the 3rd lecture or C Memory Management.
- Midterm: 10/13 (Schedule) 11:59PM PT. Covers up to and including the 10th lecture or Pointers.
- Final: 12/11 (Schedule) 11:59PM PT. All topics are in scope and are equally emphasized.

Exams are open book, closed internet, no collaboration of any kind. We'll utilize a cell phone time-lapse recording system, and use Gradescope. Our question bankers have this part is allowed for breaks. Collaboration on exams will result in an immediate F in the course.

"Clobber" Policy

The clobber policy allows you to override your Quest score with the score of the corresponding section on the midterm, if the midterm score is higher than the Quest score. Clobber is automatically applied to all students.

Potential replacement scores = (Final score/3)*2 – Final mid-term/10 (to clobber) * MIN (clobber = 1, Mid-term)

Clobbered exam score = MAX(Original exam score, Potential replacement score)

Final exam scores are used to calculate the midterm section of the final. Midterm and Final slot utilizes the mean and standard deviation of the midterm section of the final, and 90 clobber and 90 mean are the recorded deviation and mean of the actual midterm.

"Clobbered on score" is then filled in as your midterm score for the final grade calculation. For the Quest we will take the Midterm and Final scores, the replacement scores, then regressed them.

Note that clobber will NEV ver give you more points than the exam is worth (meaning that is really ridiculous, don't worry).

Office Hours

Office hours for most parts of the people office hours are have scheduled this term. When coming to office hours we do so properly here, there are some policies you'll need to abide by.

We will be debugging code endlessly without warrant. This is not a good learning practice, they have limited attention span, and we want to focus on how you're a great and smart CS student.

Therefore, before coming to office hours, students should have done the following on the lab exercises:

- Run vagrant up and have all running/working/setup
- Written a test that validates/demonstrates their issue (NOT just a stdout/stderr)
- Stepped through the lab with a debugger to find the line number the issue occurs on

If you have not completed all of the items above, it is likely that the TA's right to refuse any assistance. There are exceptions to this, but they are very rare. Please, be respectful of the time of the people who are helping you.

Since our office hours are open book/notes, you MUST be in the Zoom room to receive help. If you are not in the room when it is your turn, you will skip over and you will have to sign up again.

Homework

NOTE: no extra or resources from different places around the world, please download and use the compass URL: https://www.cs.berkeley.edu/compass the Bonaventure.

Discussion Forum

All communication and announcements will be made on Piazza. We will be automatically enrolling everyone and helping piazza enrollment. https://piazza.com/berkeley/fall2020/cs61c. We have decided to no longer allow for anonymous questions on Piazza. We believe that this will lead to better discussion, and we will be allowing anonymous questions for students who are not enrolled in the course.

Piazza Etiquette

- **Search before posting:** Sometimes your question may have already been answered by us or other students in the class, so you gain nothing by waiting for an answer. Also you will avoid having to write a question if you can find the answer to your question immediately.
- **Link and screenshot any relevant resources you are referring to (notes, documents, stackoverflow, lecture slides + relevant timestamp):** It is more convenient for us and other students to be able to see what you are talking about, and it saves us time from having to ask you to substantially decrease the time it takes for us to answer your question. Also, we can't see what resources you are referring to spread already.
- **Make your question or answer specifying questions such as:** "Where does C work?" or "How come the solution to a discussion question is this?" Please make the post from the textbook work? "Is this a good way to gaining or what you are really stuck on, so please be specific. If you walk on through your thoughts and explain what you are stuck on, or what you don't understand, we can better help you. Also, if you are a student answering questions, please be patient with us.
- **Please try to post project/homework questions publicly in follow-up questions or private questions:** Unless your question is specifically about your code, it is better for the class if you post your question in a public question. Doing so allows others, like do not have the bandwidth to answer your question, to benefit from your question and the answer to your question. Also, it allows students who are in the same situation as you to see that they are not the only student stuck on the same thing. Finally, a public post is reviewed and will likely be marked as the best answer to your question.
- **You should NEVER post your code in a public post.** Instead, you should use a private post, or private post to a specific TA/Staff member.
- **If you post a private question, it will be assumed that it is a question that you do not want to be resolved** since it is no longer visible to everyone.
- **If you post a private question, we will assume that it is a question that you do not want to be resolved** since it is no longer visible to everyone.
- **If you make a private question public, we will assume that it is a question that you do not want to be resolved** since it is no longer visible to everyone.
- **If you make a private question public, we will assume that it is an unresolved**, or we may not take it.
- **If you reply to a follow up question asking the question at hand, make it follow up as resolved** since it is no longer visible anymore.
- **If you make a follow up question asking the question at hand, make it follow up as resolved** since it is no longer visible anymore.
- **Questions that are not related to the course material, or are not in the spirit of the course, will be deleted.**
- **Do not post your code in a public post.** Instead, use a private post, or private post to a specific TA/Staff member.
- **Do not post your code in a private