

The Truth About CS169

January 21, 2018

1 Introduction

With Weenix being released soon, the TA staff wanted to take a few moments to give some more information about the project. We believe very strongly that anybody who wants to complete CS169 can do so, and that it needn't be a scary experience. That being said, many brilliant, talented computer scientists do not take CS169, which is a completely valid option as well. Finally, the students who take CS169 are normal students, just like you. Being a CS wizard is definitely not necessary to be successful in the class.

Below, we've included a few more points that we'd like to convey.

2 Workload

If you take CS169, you will still have a vibrant life apart from the course.

Here are some points on 169 and how time-consuming it is. We have included some personal anecdotes (including some from previous years' staff).

- CS169 is definitely a time-consuming course. It's a lot of work!
- However, there are many ways to do this work. For example:
 - Alex K and DJ worked over spring break and weren't stressed at the end of the course.
 - Indy and Eli didn't do that, and worked hard during the last week.
 - Jake worked from home the whole time and never lived in the SunLab!
 - Alex L worked consistently a couple of hours per day, never more than that. He wasn't stressed at the end.
 - Ryan worked usually an hour or two per day, and occasionally had to delve in a bit further in a longer session. However, he spread the work out and was not especially stressed.
 - Jan took more time to get to know the weenix code-base in the first half of the course and worked longer hours during the second half. He'd like to point out that taking time to read the stencil thoroughly before writing a lot of code will usually make the experience of writing the code more pleasant!
 - Kyle hit all the earlier deadlines (procs, drivers, VFS), but when S5FS and spring break came around, he took a long break and ended up crunched for time at the end – which was too bad, because he thought VM was the coolest part of the class!
 - Sorin liked the flexibility of 169 since it allowed him to adjust how much he works on Weenix depending on what was going on outside of 167/9. Overall, he worked most weeks, but took some off to focus on other classes or commitments. For example, he started Procs late, but was able to finish VFS early.

- Ian finished procs and drivers early. Then, in an act of foolishness, he procrastinated on VFS, and ended up finishing almost a week late. Determined not to repeat his mistake, he worked a few hours each day for the rest of the semester, and completed S5FS and VM just on time.
 - Tommy procrastinated at the beginning and started to feel stressed when he missed the deadline for Drivers. Then, he worked consistently for a couple of hours every day except during spring break, and ended up finishing weenix with two weeks to spare.
 - Isaac hit the ground running but then fell a little behind. He finished VFS during Spring Break (on a plane!) and wrote a substantial portion of S5FS on the first night of Spring Weekend because he didn't care about Fetty Wap. He had plenty of time for VM but encountered a really tough bug that he didn't have the time to fully track down and fix. His advice would be to plan to finish VM well ahead of time, in case you have a bug that holds you up for days.
 - Egor started well and hit the procs deadline, but then fell behind on drivers and VFS and was about a month behind schedule mid-April. As such, he worked a lot during spring break to finish up VFS and start S5FS to catch up, and in the end had 3 weeks to work on VM. Nevertheless, he managed to finish all of VM and have a fully functional Weenix by the end. As such, he would highly recommend to stick to the deadlines as much as possible, but also say that no matter how far you fall behind, you can finish if you really want to.
 - Steven was doing well in Weenix until midterms hit. He steadily fell behind and ended up working a week straight on it the week before it was due. Steven did not enjoy that week but realizes it couldn't be helped given his other class schedules. Steven finished Weenix on time and recommends to just gain comprehension of the parts before trying to implement them.
 - Max started off well and steadily hit the deadlines until VFS. He finished VFS and S5FS both a few days after their deadlines and had to hustle a bit to get VM finished. He would like to note that you never know how much time/effort a bug is going to take to fix, so you should start early, test early, and try to stay in the Weenix mindset by consistently putting in some time every day.
 - Jon started strong but also started to fall behind in VFS and S5FS. He was able to pull through VM in spite of issues such as executing uninitialized memory. He says GDB is your best friend, especially the `layout src` command. He suggests improving your GDB skills throughout the semester.
 - Ben met the deadlines for Procs and Drivers, but put off working on VFS because of work in other classes. He was a week or two behind for VFS and S5FS, and had to put in a lot of work in the last week to get caught up. In retrospect, he'd encourage you to start reading the assignment on the day it comes out, even if you can't work on it until later.
- Every TA, and others in the course, still had other large time commitments inside and *outside* the department.
 - This course is a lot of work, but there are a lot of ways to schedule it into your semester.
 - Getting comfortable in your editing environment and exploring tools that aid code navigation will save you a lot of time searching through the directory tree and fixing compiler errors.

3 You can do it

Anyone who has taken an introductory systems course (such as CS033) can complete CS169

- We firmly believe that anyone can complete CS169. As we said, it's a lot of work, but the material isn't outside of anyone's grasp.
- You can do it!
- We can help. If you're behind or worried, then come to TA hours, talk to your mentor TA, send us an email, post on Piazza, etc. We're not going to fault you for being worried or getting behind: we were all in the same position! Let us help you.

4 CS167 alone is great too!

CS167 is absolutely a valuable experience.

- If you're interested in systems or just want to understand how your computer works more, you are still going to learn a lot from CS167.
- It's still an upper level CS course!
- There are a lot of reasons not to take 169 — having other commitments, not being that interested in the material, etc.
- The only projects that are very different in 169 are drivers and VM — You will still implement scheduling and a file system.
- Tom Repetti took CS167 two years ago, and went on to be an amazing CS33 TA.
- CS167 will still make you a better programmer and expose you to many of the same insights that make 169 so cool.
- Many extremely intelligent and talented people never take CS169.
 - And they never regret not doing so.
 - There are a lot of really difficult upper-level classes in this department. CS169 is just one of them.
 - Completing many other upper-division courses is equally as impressive.
 - Not everyone is interested in Operating Systems, so you may find other courses to be more worth your time.

5 Some employers like CS169

If you take CS169, certain employers will be interested.

- Many companies (like Apple, Joyent, and Delphix) have heard of Brown's CS169.
- They have hired a bunch of former CS169 students who currently work there.
- Obviously, you won't automatically get a job if you do take CS169.
- You don't have to work at one of these types of places.
 - Indy is working for Pinterest.
 - Jackson Owens now works for Square.
 - You don't even have to get a job!
 - Grad school/academia is another valid option, and this course can still be applicable in this field (see: Tom).