acm UCLA Samueli Computer Science

Computer Science Town Hall

Wednesday, February 24
6:00 pm PST

Land Acknowledgement

ACM and UPE at UCLA acknowledge our presence on the traditional, ancestral and unceded territory of the Gabrielino/Tongva peoples.

Agenda

1. Introductions
2. Diversity and Inclusion
3. Academic Curriculum
4. Academic Honesty

Introductions

Professors

Chang, Cho, Cong, Eggert, Gu, Kim, Korf, Millstein, Nachenberg, Nowatzki, Peng, Reiher, Smallberg, Sun

Classes you teach

Favorite spot on campus

Favorite quarantine activity

Structure

- Present survey results
- Ask questions through Slido (can be anonymous)
  - Format: *"[Diversity] My diversity question?"*
  - Upvote questions you want answered
- Guiding questions
- Open Slido Q&A

Live Questions
tinyurl.com/cs-townhall-2021

Diversity and Inclusion

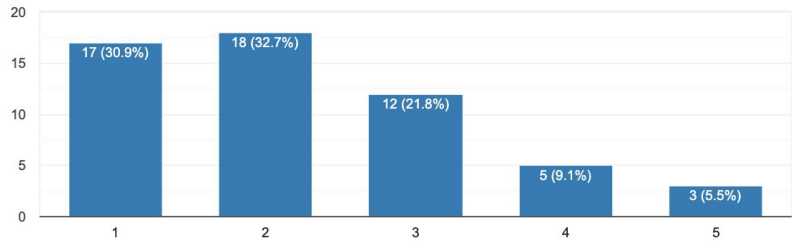
Live Questions
tinyurl.com/cs-townhall-2021

Diversity Survey: Overview

60+ responses, anonymous

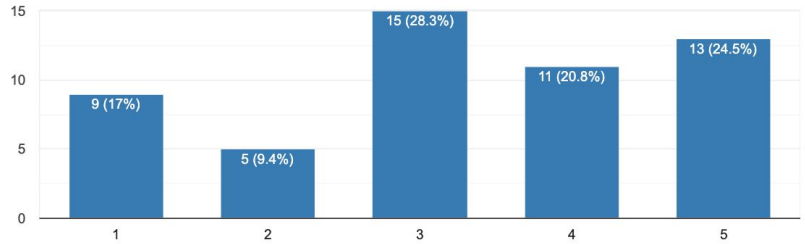
Do you feel that the image of the UCLA CS community is representative of all students, regardless of background, experience, etc?

55 responses



Do you feel like you belong in the CS major?

53 responses



Live Questions

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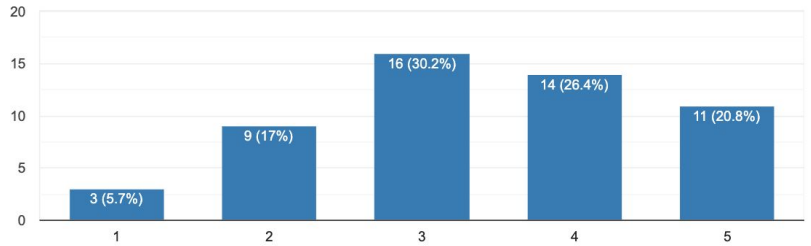
Diversity Survey: Overview

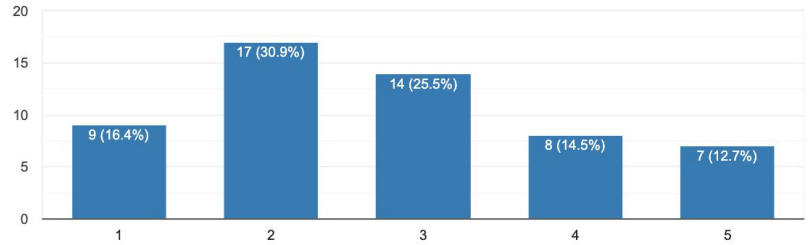
Do you feel like your professors, TAs, and classes are inclusive?

53 responses



Is the CS major is welcoming to minorities?

55 responses



Live Questions

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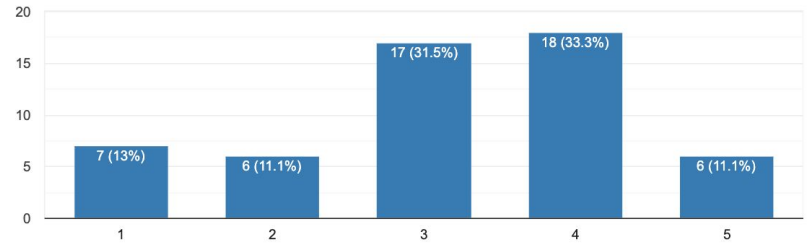
Diversity Survey: Overview

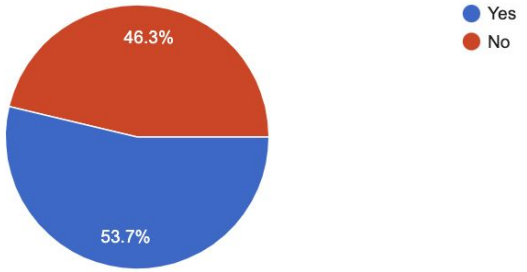
Do you feel supported in UCLA CS?

54 responses



Have you ever experienced implicit bias from the UCLA CS community?

54 responses



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Survey: Student Comments on Diversity

- “Many TAs and students I feel have **underestimated my intellect as a woman**. I have had TAs who seemed surprised when I am able to answer questions or do technical work correctly. TAs and Professors in their office hours have explained things to me quite differently, in less technical terms, than other males in the group.”
- “There seems to be **no individualized support for students of color, first-gen students, and students who are completely new to CS**. “
- “**Not everyone has the resources to teach themselves content** they should be being taught by the professors paid to teach them. And **weed-out classes have always been a tool of exclusion for communities of color and students with disabilities**. If it weren’t for the communities that I found (which I mentioned in the previous response), I wouldn’t have continued in the CS department”

Live Questions
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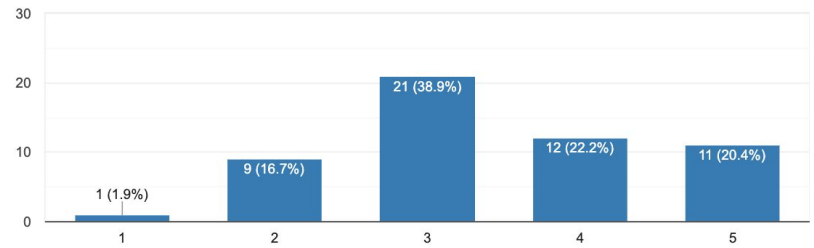
Survey: Imposter Syndrome

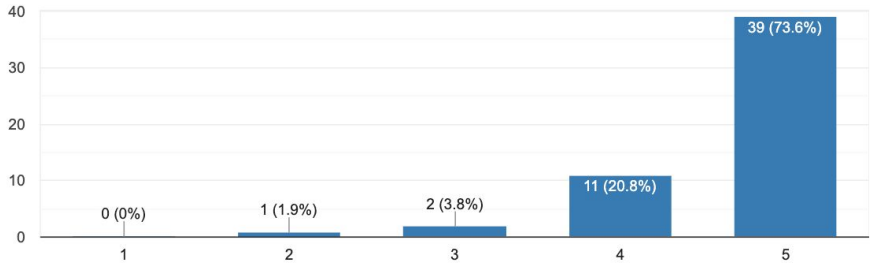
There is too much pressure in the CS major regarding GPA

54 responses



There is too much pressure in the CS major regarding internships

53 responses



Live Questions

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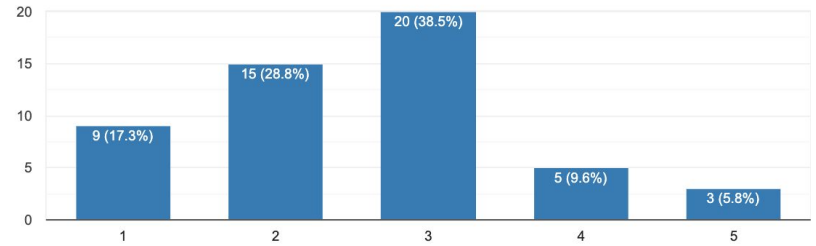
Survey: Imposter Syndrome

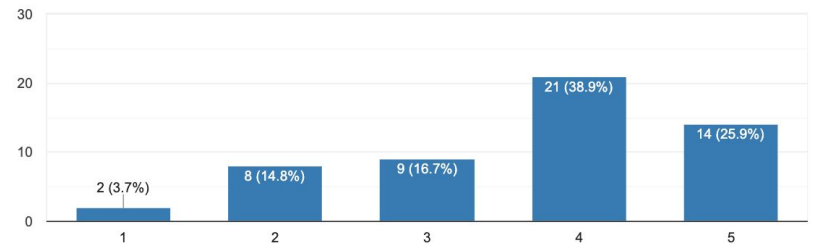
There is too much pressure in the CS major regarding research

52 responses



I feel comfortable asking my peers for help

54 responses



Live Questions

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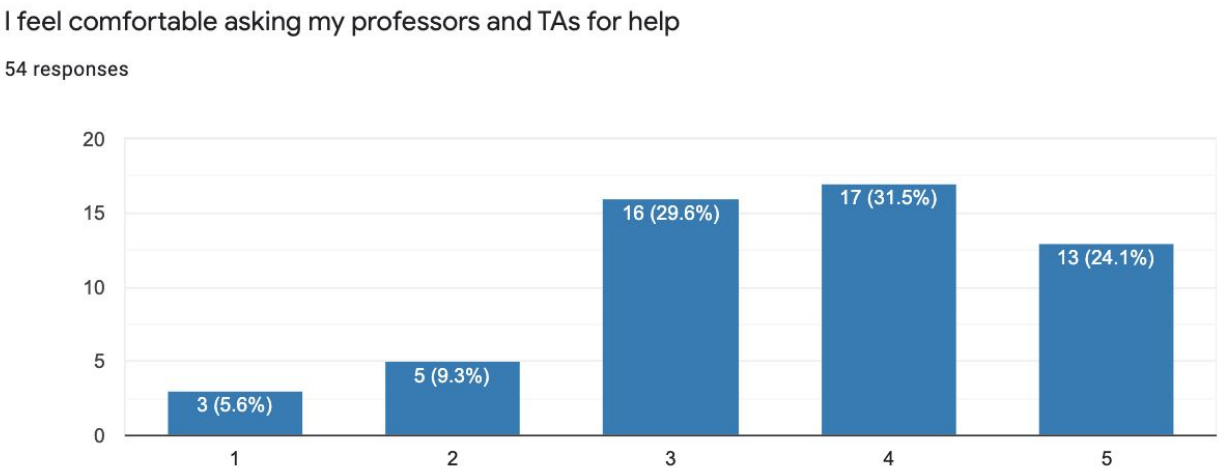
Survey: Imposter Syndrome



Live Questions
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Survey: Student comments on Imposter Syndrome

- “I feel really **inadequate** when other students are getting **internships** and I'm still recruiting”
- “I like programming, but not to the point where I devote all my time to it or even do it outside of schoolwork/one or two clubs ... **I sometimes feel inadequate because I don't devote my life to it like other students do**.”
- “**I frequently feel that professors don't care about us**. Often I feel they are trying to trick us and hurt our grades. That is due to **UCLA culture, it doesn't care about us, it cares about our GPA**.”

Live Questions
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Survey: Student comments on Imposter Syndrome

- "**The professors who insist on a learn-by-doing "teaching" style have always made me feel incredibly inadequate**. Yes, in industry we will need to learn things by looking them up and just practicing them. But when we're learning fundamental core concepts and methods in an undergraduate CS classroom, we need to be TAUGHT what we're doing first, so that we can later teach ourselves as we build off of that foundation. **Not everyone has the same resources**, and the only place in which UCLA CS students are (for the most part) equal is in that they have access to lecture and to a professor who is meant to teach them."

Live Questions
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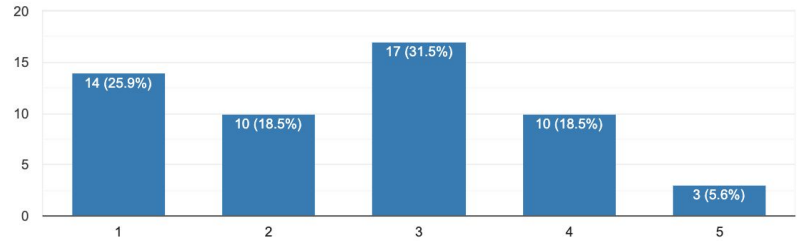
Survey: Diversity and Inclusion in the CS Department

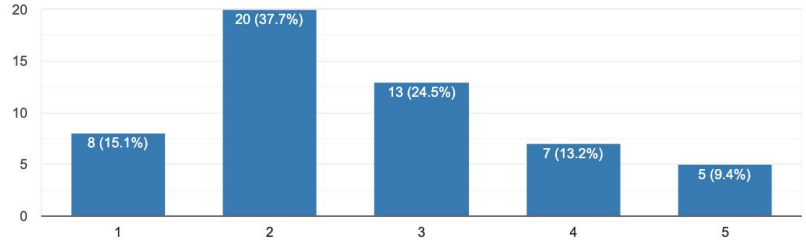
The CS Department understands the impact of their words and actions

54 responses



The CS Department is actively listening to student input about diversity and inclusion

53 responses



Live Questions

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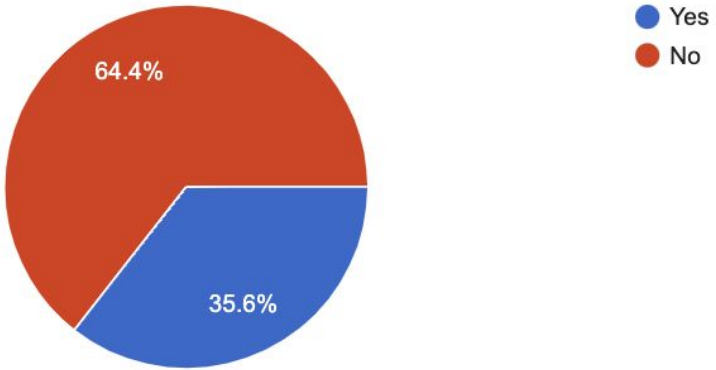
Survey: Diversity and Inclusion in the CS Department

The curriculum and course structure of UCLA CS are friendly to everyone, regardless of access to resources or disability

45 responses



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Survey: Student comments on Diversity and Inclusion in the CS Department

- "**Professors could be more open to listening to student concerns outside of class**. I don't think students will be comfortable until faculty explicitly set time aside to listen to students."
- "**At a department level, we need low-friction mechanisms to provide feedback**. Student liaisons and involving student organizations is one way; another is having more events like town halls and fireside chats where students interact with department more frequently, making them more approachable."
- "Student input and accountability around it. **Currently, the average CS student has no idea who the diversity dean is or what they do.** They don't know about standing committees, or liaison panels, or who in the student body they can raise concerns about diversity and inclusion to. **Students do not know about the new mentor professor program** ... **we need much more communication around what the department does, what statistics and feedback that it does receive, and what it does around them**."

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Guiding Questions

- What actions or initiatives have been or are currently being taken on a departmental level to address diversity, equity, and inclusion in computer science? What is the impact of these initiatives?
- How have you personally taken action to learn about diversity and equity issues and ensure inclusion in your classrooms?
    - Some diversity/equity issues include:
        - Accessibility
        - Implicit bias
        - Mental health
        - Representation of racial/gender/sexual minorities

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Diversity and Inclusion: Slido Q&A

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5-Minute Break

Up Next: Academic Curriculum

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Academic Curriculum

Live Questions
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Current Curriculum

Live Questions
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Lower Division Curriculum

*CE only

Changes in recent years

- Updating CS 35L with CS 97 material
- Addition of CS 30
- Only 1 Physics lab: 4AL or 4BL
- Learning Assistants

Math 31A
Math 31B
Math 32A
Math 32B
Math 33A
Math 33B
Math 61
Physics 1A
Physics 1B
Physics 1C
Physics 4AL or Physics 4BL
ENGR 96C
EC ENGR 1 or COM SCI 1
EC ENGR 3 *CSE and CE
COM SCI 31
COM SCI 32
COM SCI 33
COM SCI 35L
COM SCI M51A or EC ENGR M16

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Upper Division Curriculum

Computer Science

**CS 111
CS 118
CS 131
CS M151B or ECE M116C
CS M152A or ECE M116L
**CS 180
CS 181
Capstone: CS 130 or 152B
**Stats 100A, CEE 110, ECE 131A, Math 170A, or Math 170E
CS Upper Div Elective #1 (CS 100-187)
CS Upper Div Elective #2 (CS 100-187)
CS Upper Div Elective #3 (CS 100-187)
CS Upper Div Elective #4 (CS 100-187)
CS Upper Div Elective #5 (CS 100-187)
TBR #1
TBR #2
TBR #3
Sci-Tech #1
Sci-Tech #2
Sci-Tech #3

Computer Science and Engineering

**CS 111
CS 118
CS 131
CS M151B or ECE M116C
CS M152A or ECE M116L
**CS 180
CS 181
Capstone: 152B
**Stats 100A, CEE 110, ECE 131A, Math 170A, or Math 170E
ECE 100
ECE 102
ECE 115C
ECE Upper Div Elective #1 (ECE 101-187)
CS Upper Div Elective #1 (CS 100-187)
CS Upper Div Elective #2 (CS 100-187)
CS Upper Div Elective #3 (CS 100-187)
TBR #1
TBR #2
TBR #3

Computer Engineering

COM SCI 111
COM SCI 118 or EC ENGR 132B
COM SCI M151B or EC ENGR M116C
COM SCI M152A or EC ENGR M116L
COM SCI 180
EC ENGR 100
EC ENGR 102
EC ENGR 113
EC ENGR 115C
STATS 100A, C&EE 110, EC ENGR 131A, or Math 170A
EC ENGR Capstone Course DA*
EC ENGR Capstone Course DB*
EC ENGR Elective #1 (Upper Div EC ENGR Course, 100-187)
EC ENGR Elective #2 (Upper Div EC ENGR Course, 100-187)
COM SCI Elective #1 (Upper Div COM SCI Course, 100-187)
COM SCI Elective #2 (Upper Div COM SCI Course, 100-187)
TBR #1**
TBR #2**
TBR #3**

Live Questions

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Upper Division Curriculum

Changes in recent years

- Added Digital Humanities as a Tech Breadth area
- Removed restrictions on CS electives (CS 112 and CS 170A)
- Updated requirements for CSE to replace EE 10/110/11L with EE 100 and EE 115C.
- Added new offerings of CS 188 (e.g. Scalable Internet Services, HCI, Distributed Systems, Computer Vision, Distributed Algorithms, Blockchain)
    - To address student concern for more industry-track courses and group project-based courses

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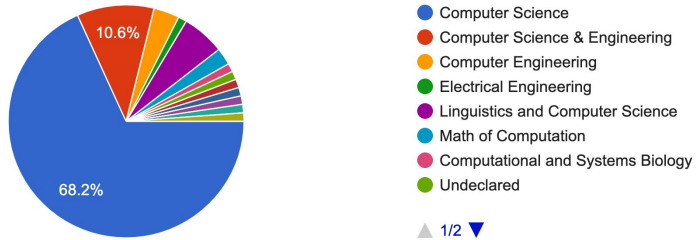
Survey Responses

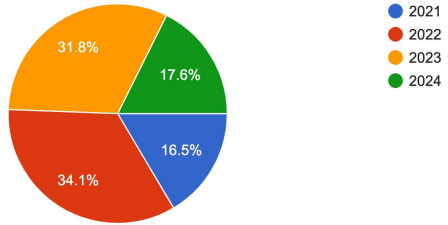
Major

85 responses



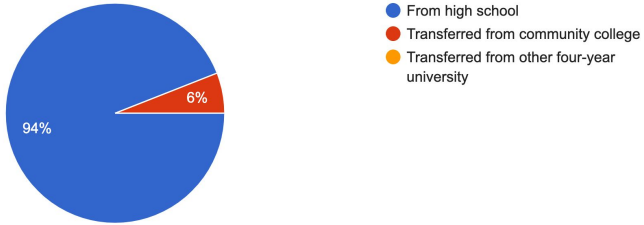
Graduation Year

85 responses



Path to UCLA

84 responses

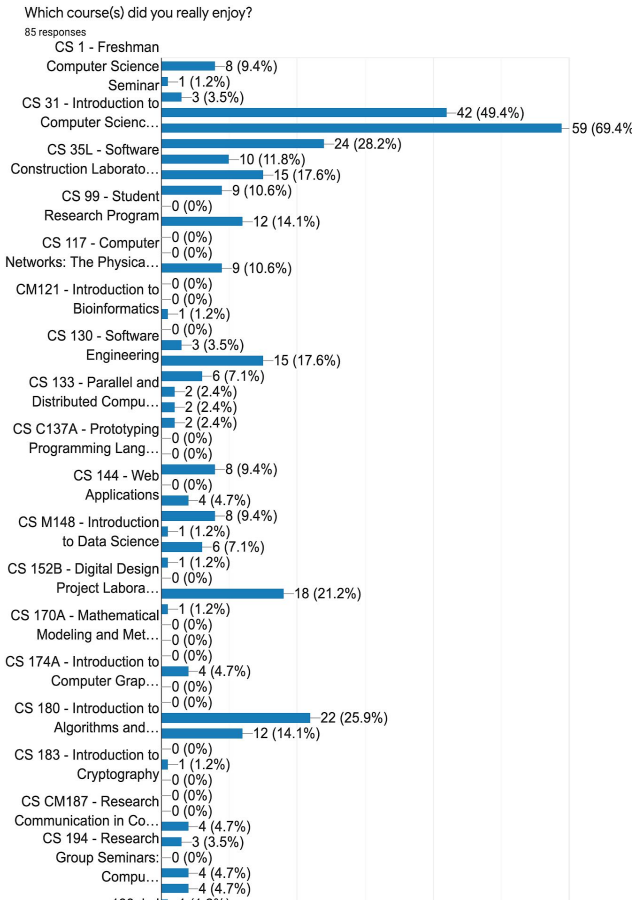


90+ responses

Survey: Courses students enjoyed

The most enjoyable classes according to students:

CS 31, CS 32, CS 33, CS M51A, CS 180, CS 161



Live Questions
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What made these courses enjoyable?

The subjects were interesting and relevant to work opportunities and job interviews. The projects were more interesting than other courses

Engaging and fun professors, clearly organized and structured curriculum, well-prepared and engaging TA's

i've liked the conceptual material of most classes at ucla; what stresses me out about most classes (and what didn't stress me out about these) is that the workload seemed reasonable for what was taught in class, and i didn't feel like my grade was going to get determined in a way i did not have control over - as long as i put in the work, it would show in my final result.

Unique projects, extensive applicability

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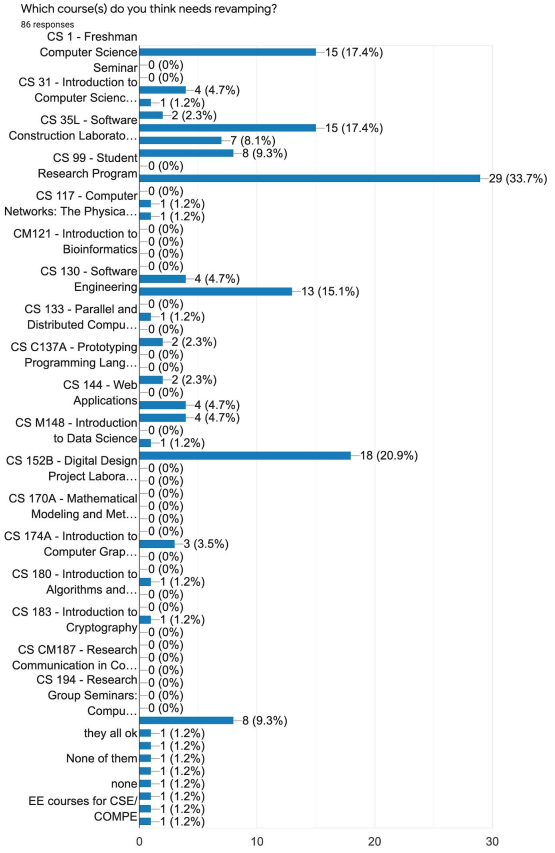
Survey: Courses students wish to see change in?

Top courses that students want to see changes in:

CS 111, CS 152A, CS 131, CS 1



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What changes would you make to these courses?

CS M152A: This is a radical comment but I feel like the hardware requirement isn't really applicable for CS majors especially - if we could replace this requirement with an elective that's a little more applicable (e.g. CS 143) and instead make this an elective, that'd be really helpful for CS majors in the long run (I haven't met another CS major who works with Verilog in industry).

I would like to have 152A removed as a requirement.

CS M152A

- Issues of relevance to CS
- Support for replacing it with a more applicable requirement like a current elective (e.g. CS 143)

CS 111 and 131

- Heavy workload
- Projects incorporating more lecture material
- Checkpoints, grading scripts

CS 111 and 131: include more lecture material that relates to each project, especially for the second half of the courses. Every project felt disconnected from lectures and thus was hard to get started.

CS 111, 131: Introducing more checkpoints for projects, grading scripts

CS35L/97/111/131 - these classes all have a) extremely rigorous homework that is b) largely disconnected to the source material of the class. I think the combination of both of those is extremely unmotivating for students, and probably encourages a lot of cheating. I would love to see assessments that are closer to what we see in CS 33 with Reinman: interactive, learn-by-exploring assessments or projects that are more closely tied to course curriculum. I think CS97 was a step in the right direction, but not enough.

CS 111 is effectively the content of a semester long course being crammed into a quarter. 111 either should be split up into 2 courses, offered over 2 quarters. Or 111 should be increased to 7-8 units to reflect the workload taken in one quarter.

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Future CS course offerings students want to see

- CS Ethics, Social Impact, Public Policy
- Quantum computing / complexity theory
- Mobile / web development
- User interface / User experience (UI/UX)
- Cryptography and cybersecurity

mobile development, web development, game development

Public policy w/ CS, VR/AR engines

Mobile development, virtual/augmented reality, any class relating CS and film (I've heard of ML applications with animation and I'm not sure if that's covered)

Distributed Systems, Natural Language Processing, Data Engineering

CS ethics, public policy in CS, CS + Social Impact

VR/AR, More theoretical courses like Cryptography and Complexity Theory at an undergraduate level

more computer security courses

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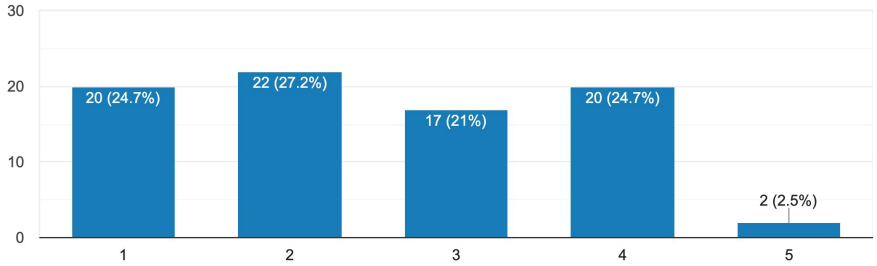
Survey: Ease of fulfilling requirements

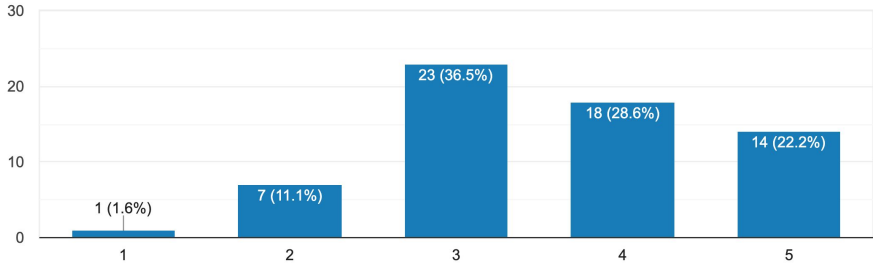
How easy is it to navigate / figure out which courses are mandatory to fulfill requirements?

81 responses



If you sought help from the HSSEAS academic office or counselors, how helpful was the support?

63 responses



Live Questions

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Survey: How does UCLA Computer Science compare with the curriculum offered at peer institutions?

Curriculum offered by other universities:

Stanford

- Students can choose tracks, such as AI, HCI, Graphics, Theory, etc.
- CS 106S: Coding for Social Good
- A wider range of courses in modern deep learning

UC Berkeley

- Student-led classes via the DeCal program
- A wider variety of tech electives courses, from psychology to music to anthropology

UC San Diego

- Music 177 (essentially a C++ + EE hybrid course)
- Many courses on computer graphics and computer vision

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Survey: How can UCLA CS further improve the curriculum?

available grading scripts for projects would be very helpful, as well, as well as more small checkpoints of our understanding.

More lecturers/Industry professor

Recording lectures! The best thing to come out of remote learning is being able to rewatch lectures or simply view them at our own speed.

More tech breadth choices; Less physics; More study abroad opportunities

grading scripts for projects so you know you're on the right track, recording lectures, assignments are relevant to the lectures, more encouragement of collaboration

- Student involvement in curriculum development, **mid-quarter feedback** to professors
- Expanding USIE to something more like **Berkeley's DeCal** (student-led courses)
- **Revisit requirements**: physics, CS M152A

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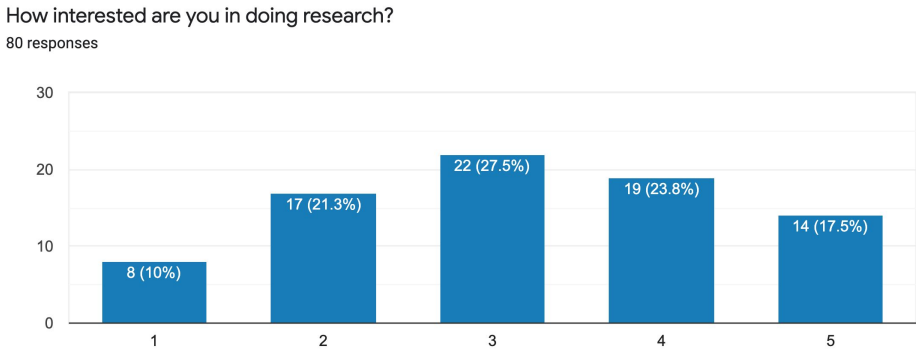
Survey: Research



Opportunities

- Cold-emailing professors
- Social media
- Contacting professors after taking their classes

Roadblocks

- “I’m not sure if I know enough to do research and I do not how to approach professors and get started”
- “Finding opportunities, having the requested experience. Hard to get into a position without prior experience”
- “I've cold emailed many professors, but it seems like im either underqualified or they don't want undergraduates”

Live Questions
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Guiding Questions

- Are there any talks about changing the ratio of required courses to electives? Many students have expressed interest in taking more elective courses to cater to their interests.

- Many other universities offer student-led courses for credit, such as UC Berkeley's DeCal program, which offers 1-2 unit classes that cover more modern topics, allowing for students to explore these interests. Is the CS Department open to running a similar program?

Live Questions
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Academic Curriculum: Slido Q&A

Live Questions
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Academic Honesty

Live Questions
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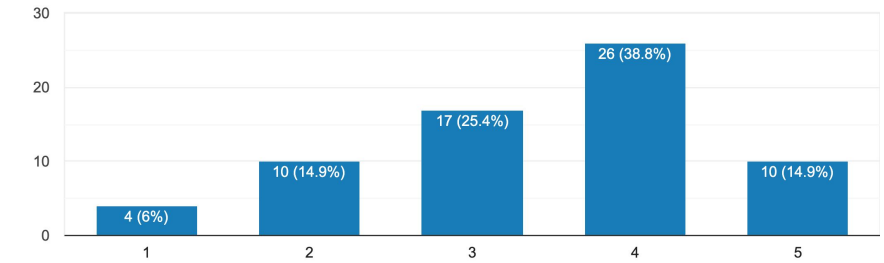
Survey Overview: Strengths

70+ responses

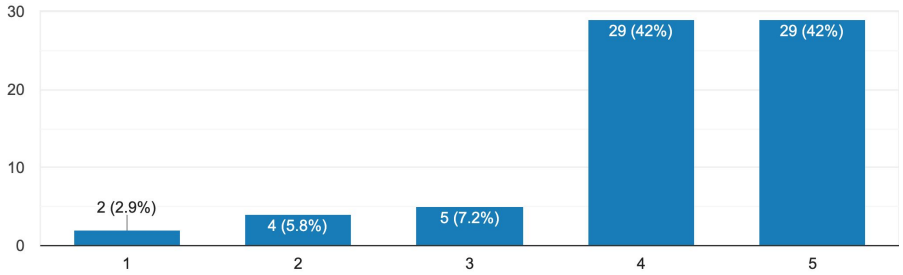
How much do you think your professors have prioritized your learning and understanding of the material?

67 responses



How much do you respect your CS professors?

69 responses



1: Not Respected
5: Extremely Respected

Live Questions
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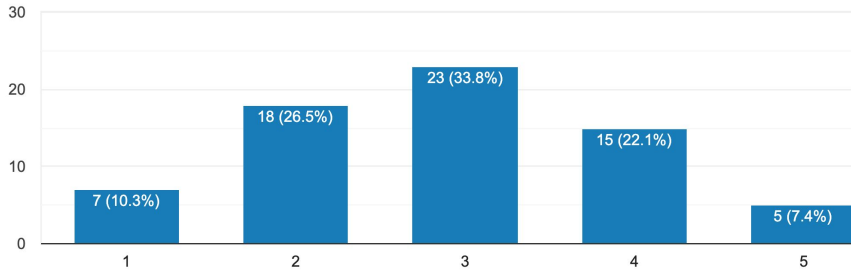
Survey Overview: Weaknesses

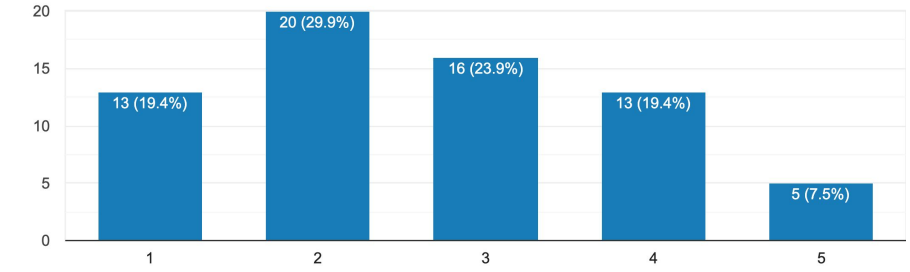
How much do you think your professors have respected your time?

68 responses



How much do you think your professors have considered your mental well-being?

67 responses



1: Not Respected
5: Extremely Respected

Live Questions
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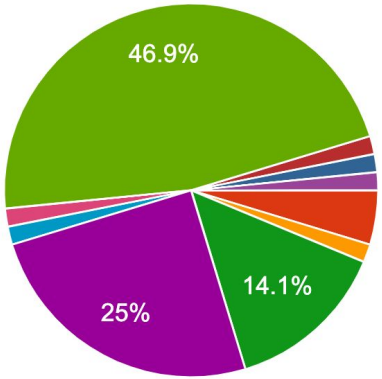
What is the first course students cheat in?



- CS 30
- CS 31
- CS 32
- CS 33
- CS 35L / 97
- CS 111
- CS 131
- N/A: I have not cheated

1/2

60+ responses

Live Questions
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Do students feel emboldened to continue cheating after cheating in one class?

40+ responses

Live Questions
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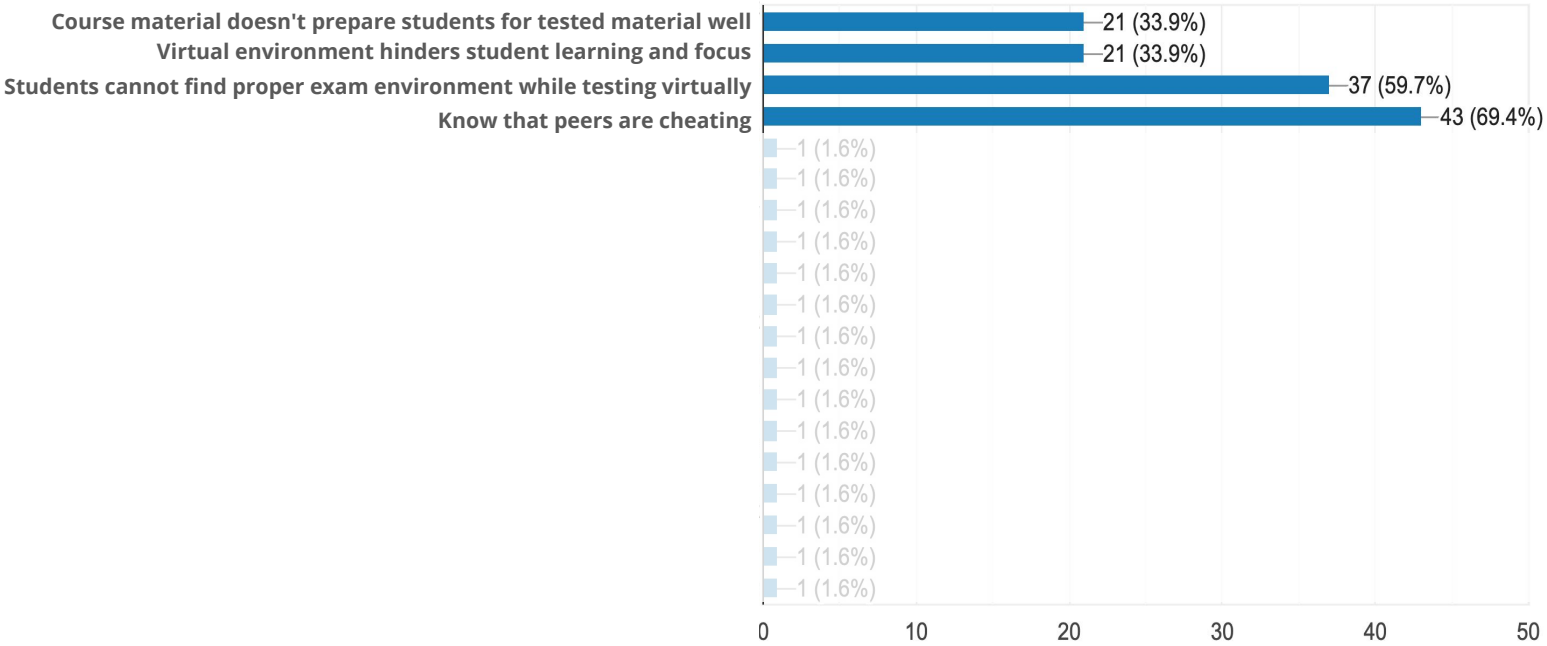
What do you think prompts cheating?



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Acceptable Resources (Outside of Class)

- UPE Tutoring
  - Weekdays 9am-5pm
  - Review Sessions
  - Project Hack Workshops
- Office hours
- Piazza
- Peer collaboration (when allowed)

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Not Enough Resources

- Students often have **conflicts with professor and TA office hours**, leaving them with nowhere else to turn to for guidance
  - Some cite that referencing GitHub code actually **helps them learn better**

- **Vague project specs** can leave students with no idea of where to start
  - Especially if the project is unrelated to the material currently taught in class
  - Students say that **example code** and **project skeletons** are incredibly helpful

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Do students believe that projects should be allowed to be uploaded on GitHub?

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Posting Projects on GitHub

- Some course syllabi now state students may **not post** projects on GitHub
  - GitHub is an industry standard for job recruitment
  - Removing course content poses **limitations on employment prospects**
  - GitHub is useful as a means of backing up and keeping track of code progress
  - GitHub is used primarily by students as a **reference when stuck**, instead of copy-paste

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Guiding Questions

1. Why do professors believe that students cheat?
2. A common gripe is that a lot of homework and projects are graded too strictly and harshly, which leads students to rely on cheating. To what extent can we **incentivize learning** over getting good grades to potentially decrease the likelihood of cheating?
    a. Potential sols: hwk graded on completion, release sanity checks for projects, etc.

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Academic Honesty:
Slido Q&A

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Thank you / Group Photo

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