



CS KickStart: Broadening Participation

UC Berkeley
cs-kickstart.berkeley.edu



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Program Goals

>>Inspire

We seek to inspire our students to study computer science by sharing its creativity and power. In order to emphasize programming as a tool to create [1], students develop a basic photo editing program during the programming lab.

>>Empower

We seek to arm participants that have little or no background in computer science with programming skills and an understanding of the various computer science fields.

>>Inform

We seek to give students a better understanding of what computer science is to correct any misconceptions. Throughout the week, students are exposed to the opportunities within computer science and to the relevance of computer science in everyday life.

>>Connect

We seek to develop a community of women with an interest in computer science. It is common for women to feel isolated within computer science courses [3], particularly given the low representation of women at research institutions [2].

>>Mentor

We seek to integrate the CS KickStart community with the thriving community at UC Berkeley for continued academic and social support. Mentorship is an important element to support the success of women in computer science [3].

Abstract

CS KickStart is a student run university-level outreach program. We bring first year students to campus one week before the fall semester to inspire participants to pursue computer science, dispel common misconceptions, and build a support network. Our program goal is to increase participation and retention of women in Electrical Engineering and Computer Science at University of California, Berkeley.

Program Overview



Hands-On Labs: During programming labs and an electrical engineering lab students gain practical first hand experience.

Left: Samples of student work



Life at Berkeley: Interactions with current undergraduates allow participants to learn about the campus.

Left: Participants exploring various locations on UC Berkeley Campus



“What is Computer Science?”: We host a series of talks about topics such as computer security, computer graphics, and computational biology.

Left: Professor Dan Garcia



Industry Visit : We take students on a feild trip to a Silicon Valley company. Past visits have included Google, Adobe and Twitter

Left: Participants visit Twitter HQ in 2013



“Who are Computer Scientists?”: We invite computer scientists working in industry and academia visit our program to talk to students.

Left: Mira Doncheva (Adobe)



Community Building: Students participate in a number of community building activities led by current undergraduates to help them get to know their peers.

Left: CS KickStart 2013

Bios

Huda Khayrallah is a third year undergraduate studying Computer Science. She was part of the first CS KickStart cohort, and has been an organizer of the program since . Huda is interested in broadening participation and has served a mentor for the Women in Science and Engineering residential program on campus and was also the Vice President of the Association of Women in Electrical Engineering and Computer Science.

Amy Tsai is currently a 3rd year student studying Electrical Engineering and Computer Science. She chose to study CS after participating in CS KickStart in 2011. She is passionate about supporting women in STEM fields, and is involved with the Society of Women Engineers, CS KickStart and the Association of Women in EECS.

Outcomes

After CS KickStart Week

After CS KickStart, I have a better sense of what computer science is	99%
I feel more prepared to take my first computer science course at UC Berkeley	96%
I have a group of people that I can contact if I get stuckk on a problem in my CS class	99%
I will begin my freshman year with friends that are also interested in computer science	100%
I plan to stay in contact with CS KickStart organizers, volunteers and/or teachers	99%
CS KickStart had a positive effect on my motivation to pursue computer science	95%
CS KickStart had a positive effect on my confidence to pursue computer science	91%
CS KickStart had a positive effect on my programming skills	95%
Before CS KickStart, I was nervous about taking my first CS course at Berkeley	88%
Before CS KickStart, I was nervous not to know anyone in my classes at UC Berkeley	73%

After 1 Semester

CS Kickstart made me better prepared and/or more confident to take my first CS class at UC Berkeley	76%
I am still in contact with other CS KickStart participants	94%
CS KickStart helped me find older students whom a I can turn to for help	90%
CS KickStart helped me find organizations to become involved with	89%
I have worked with other CS KickStart participants in my CS classes	76%
Without CS KickStart, I would not have taken a CS class	30%
My CS KickStart experience continues to invlunce my attituce towards CS in a positive way	74%

After 3 Semesters

I am still in contactwith other CS KickStart participants	77%
I am still in contact with CS KickStart organizers, volunteers, and/or teachers	73%
I have worked with other CS KickStart participants in my CS classes	77%
My CS KickStart experience coninues to influence my attitude in a positive way	86%

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Acknowledgements / References

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