

**Departmental BPC Plan**  
**Thomas Lord Department of Computer Science**  
**University of Southern California**



Effective dates of plan: 09/23/2024 - 09/23/2026

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**Context**

The University of Southern California (USC) is a private research university located in the city of Los Angeles. 46.9% of the city is Hispanic/Latino and 8.6% is African American. The Los Angeles Unified School District (LAUSD) serves a population that is 73.8% Latino and 7% African American. The Los Angeles Community College district is 57.3% Hispanic/Latino and 8.9% African American. The table presents data on the demographics for degrees awarded at USC and nationwide (data from Integrated Postsecondary Education Data System and the Taulbee Survey). Our analysis focuses on female and AHN (Americans/Blacks, Hispanic/Latino(a), and Native Americans/Alaskan Natives) students.

While we have improved gender representation in Computer Science at USC, we have not seen clear successes in student representation from other historically underrepresented groups. In this plan, we include goals and activities targeted towards increasing the number of students in CS who are women or AHN, both within USC and the local Los Angeles schools. In addition to increasing the diversity of students in computing, we also place emphasis on retention at all levels. In the most recent cohort, USC's retention stands at 84.4% across the entire population and is slightly lower for women (83.5%) and significantly lower for Hispanic/Latino and African American students (77.8%).

**Computing Degrees Awarded in 2022**

	Undergraduate		Master's		Doctoral	
	Women %	AHN %	Women %	AHN %	Women %	AHN %
USC Computing	34.3	10.0	36.4	<5	20.6	<5
USC Engineering	40.0	21.8	29.8	8.9	19.6	<5
National	23.3	14.0	29.3	5.4	24.1	<5

**Goals, Activities, and Measurements**

**G1.** Increase awareness of computer science in LAUSD schools with the goal of creating a 5% annual increase in students and teachers reached by outreach programs.

**A1(a)** Bring local public school students to USC to do hands-on research under the guidance of faculty and graduate students through the BPC-focused Summer High School Intensive in Next-Generation Engineering (SHINE) program. Assign them small research projects, instill CS thinking and communication skills. (Contact: Darin Gray)

**A1(b)** Conduct outreach and increase summer research opportunities to local community college students. (Contact: Andy Jones-Liang)

**A1(c)** Work with local K-12 teachers to assist them in CS curriculum development. Leverage our partnership with code.org and local K-12 institutions to assist in CS education. Activities include help in CS curriculum development, in-class assistance, and mentoring students. (Contact: Darin Gray)

**M1** Evaluate the number and demographics of students and teachers participating in these programs. Administer surveys to students at the beginning and end of these programs to assess their effect on students' likelihood of attending university for computing. Collect data on the demographics of community college students participating in the program who transfer to USC or another 4-year institution.

**G2.** Increase retention rates of women and AHN students until demographic differences in retention are eliminated.

**A2(a)** Provide research experiences for women and AHN undergraduates through the Center for Undergraduate Research in Viterbi Engineering (CURVE) and NSF Research Experience for Undergraduates (REU) programs, such as those coordinated by the Institute for Creative Technologies (ICT) and the Robotics and Autonomous Systems Center (RASC). (Contact: Andy Jones-Liang)

**A2(b)** Participate in Viterbi Summer Institute (VSI). This program is designed to enhance the transition to USC for engineering students from underrepresented backgrounds, and involves both coursework and research. (Contact: Traci Thomas Navarro)

**A2(c)** Participate in discussion groups or teaching workshops for undergraduate students through the Center for Engineering Diversity (CED). (Contact: Traci Thomas Navarro).

**A2(d)** Participate in redesign of Freshman Academy, which is the introductory course taken by all entering engineering students. Emphasis in the restructuring of this course will be placed on creating an inclusive and welcoming environment, and introducing computing concepts. (Contact: Gisele Ragusa)

**A2(e)** Administer a climate survey among students and faculty to assess structural barriers to equity in the department and compare with national surveys (e.g., from NCWIT). Collect statistics for CS applicants from LAUSD schools and community colleges. (Contact: Ellecia Williams)

**M2** The Office of Diversity and Strategic Initiatives will assist in collecting metrics for CS undergraduate students: enrollment by demographic group, GPA, time to graduation, retention, and student placement. Evaluate number and demographics of students participating in research through above programs. Assess changes made to Freshman Academy through student evaluations.

**G3.** Increase gender and racial diversity of graduate students, demonstrating year-over-year improvements, until numbers match or exceed those of both USC and nationwide.

**A3(a)** Conduct resident summer research programs for women and AHN undergraduates from other institutions, including the Summer Undergraduate Research Experience (SURE) and NSF Research Experience for Undergraduates (REU). (Contact: Andy Jones-Liang)

**A3(b)** Work with the Center for Engineering Diversity to develop evaluation criteria for graduate applications to ensure equitable treatment of students from all backgrounds. (Contact: Kevin Henry)

**A3(c)** Organize a town hall for graduate students at least once per academic year to facilitate an open discussion about topics such as career success and inclusivity in the department and graduate school. (Contact: Heather Culbertson)

**M3** Review demographic data of graduate application pool, admission offers, fellowship offers, acceptances, and enrollments. Compare to demographics of local and nationwide graduate enrollments. Collect data on demographics of students participating in undergraduate research programs. Administer pre and post surveys to assess programs' effect on students' likelihood of attending graduate school.

**G4.** Increase gender and racial diversity of faculty at all levels, demonstrating year-over-year improvements towards matching and then exceeding national averages.

**A4(a)** Conduct Rising Stars workshops for PhD students and postdocs. (Contact: Heather Culbertson)

**A4(b)** Invite seminar speakers from populations that are underrepresented in computing. (Contact: Angel Haro)

**A4(c)** Administer a climate survey among faculty to assess structural barriers to equity in the department and compare with national surveys (e.g., from NCWIT). (Contact: Heather Culbertson)

**M4** Evaluate demographics of faculty applications, short-lists, interviews, and offers. Establish baselines for assessing year-over-year improvement. Evaluate demographics of seminar speakers. Evaluate demographics of Rising Stars attendees and assess the workshops' effectiveness by determining the number of attendees who apply for a faculty position at USC.