

Departmental BPC Plan
Computer Science and Engineering Department
University of California, San Diego



Effective dates of Plan: 08/24/2022- 08/24/2024

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1. Context

UC San Diego is a large research-focused university. The primary campus is located in La Jolla, CA. La Jolla and the surrounding San Diego County face an extant and escalating housing crisis (third-fastest rise in cost of living in the country for the last two years). This is partially mitigated by subsidized on campus housing, but limited availability forces students off campus for part of their tenure, which restricts opportunity for students from less-resourced backgrounds.

Computer Science and Engineering (CSE) is a department inside of the Jacobs School of Engineering (JSOE) which is one of seven schools at UCSD.

	# students			% Women			%BLNPI		
	UG	MS	PhD	UG	MS	PhD	UG	MS	PhD
UCSD	30,794	3,547	3,530	50	38.9	43.8	24.7	8.2	11.6
CSE	1,959	498	269	22	23	25	10	7	< 5

As seen in the table above, CSE enrolls fewer women and Black, Latinx, Native American and Pacific Islander (BLNPI) students than the campus as a whole. In addition, while the overall undergraduate graduation rate from CSE is 88%, BLNPI students are significantly less likely to graduate with a CS degree (71% graduation rate) compared to White and Asian students. Furthermore, climate data collected in the 2018-2019 academic year suggested that women feel less belonging in CSE than men, feel less comfortable interacting with faculty, and perceive overt sexism from their peers.

2. Goals

The CSE department aims to reduce the gender and race gap in enrollment and the race gap in graduation rates by creating a diverse, equitable, and inclusive environment that supports UC San Diego’s Strategic Plan for Inclusive Excellence via the following three goals:

G1: Increase the percentage of matriculants to our undergrad and grad programs of female students and those who identify as Black, Latinx, and/or Native American within CSE year-over-year until numbers match UC San Diego numbers as a whole.

G2: Increase the retention year-over-year of Black, Latinx, and/or Native American students in our undergraduate program until there is no longer a difference in retention based on race.

G3: Increase female students’ experience of an inclusive culture in both undergraduate and graduate programs until there is no longer a difference in experience based on gender.

3. Activities and Measurement

A1: UC-HBCU program (G1). Faculty can participate in the UC-HBCU program which connects UCSD faculty to students at HBCUs via summer research opportunities. **Measurement:** Number of faculty who participate, schools students come from, Number of students who apply to our grad programs. **Contact:** Gary Cottrell and Ndapandula Nakashole.

A2: Climate surveys (undergrad) (G2 and G3). Faculty can lead and/or administer a through-course survey of the cultural/inclusive climate in our undergraduate classes. This activity involves expanding on current in-class survey efforts—including coordination, administration and analysis of surveys and data—in order to create a coordinated and up-to-date dataset on student climate. **Measurement:** Number of classes participating, response rates, climate data by gender and race. **Contact:** Christine Alvarado.

A3: Data collection and analysis (G1, G2). Faculty can work with the student affairs staff and data analysts to gather data quarterly on student retention by race and gender, including (1) enrollments in pipeline courses, (2) DWF rates and grade data from early courses, (3) students who have officially added or left the CSE major. **Measurement:** Data collected, and visualizations produced; DWF and retention rates. **Contact:** Patrick Mallon.

A4: Inclusive teaching (G2 and G3). Faculty can learn and adopt inclusive teaching practices and can train their TAs and tutors to use inclusive practices. This activity also includes coordinating these efforts across the department. Faculty can opt-into having their teaching observed by the Teaching and Learning Commons. **Measurement:** Inventory of classes and class components (lectures, labs, discussions, office hours) that use inclusive teaching practices, classroom climate survey results (see A2), percent of faculty who have their teaching observed by TLC. **Contact:** Gerald Soosai-Raj.

A5: Undergraduate curriculum revision (G2). Faculty can lead and assist with developing and implementing a more open undergrad degree that helps students who have less preparation stay in the program by increasing flexibility and decreasing specific requirements. **Measurement:** Retention, Time to degree for students, by race/ethnicity. **Contact:** CSE Vice-Chair for Undergraduate Affairs

A6: TA/tutor hiring (G2). Faculty can lead and assist with development and implementation of new centralized and inclusive tutor and TA hiring and re-hiring practices. **Measurement:** Demographics of tutors hired. Student surveys of tutor inclusivity (see A2). Metrics on TA/tutor re-hire rate. **Contact:** CSE TA Advisor, CSE Tutor Advisor.

A7: Pipeline efforts (G1, G2, G3): Faculty can supervise research students through the Early Research Scholars Program and other diversity-focused research programs and commit to mentoring these students through to graduate school. Faculty can lead and participate in other pipeline programs such as workshops to teach students about grad school. **Measurement:** Number of faculty involved in ERSP or other programs. Length of engagement with students. Number and demographics of their students that apply to and/or go on to graduate school. **Contact:** Christine Alvarado and Steve Swanson.

A8: Inclusive service (G1, G2, G3). Faculty can improve the diversity, equity, and inclusion of the CSE through committee work and other service obligations. **Measurement:** A survey of the number of hours of service work towards DEI goals per faculty member per year. For those in advisory roles, a measure of satisfaction/utility of the advisor from the group(s) they support. **Contact:** George Porter.