Departmental BPC Plan
Computer Sciences Department
University of Wisconsin–Madison

Effective dates of Plan: 02/07/2023- 02/07/2025
Contact: Michael Swift, swift@cs.wisc.edu. Chair of DEI committee

1. Context

CS at UW is in the College of Letters and Sciences, and students apply to the university and then declare a major before the end of their fourth semester. UW is an R1 school in the upper Midwest. The department has more than 2200 undergraduate majors and 400 graduate students. The table shows the demographics of CS students for the 2021-22 academic year. UW

	CS Ugrad degrees	CS Grad degrees	CS Faculty	University undergrad
Men	83%	78%	89%	49%
Women	17%	22%	11%	51%
Underrepresented groups	6%	2%	0%	12%

defines underrepresented groups to include Black/African American, Native American, Hispanic/Latino/a, Southeast Asian (Cambodians, Laotians, Vietnamese, and Hmong). This definition comes from Wis. state law and includes SE Asians, notably those who came to the United States after the end of the Vietnam War from Laos, Cambodia, Vietnam, and Thailand.

Past successes: UW has seen improvements in participation in the past decade. The number of women has greatly increased over 6 years from 36 women receiving a BA/BS to 141, and the percentage of BA/BS recipients that are women increased by 10 percentage points . The department created a new introductory sequence supporting non-programmers, with equal grade outcomes from men/women; a new non-major programming course CS 220 that averages 35% women; a Data Science major that is 26% women. The CS has long run the Wisconsin Emerging Scholars (WES)-CS program taken by 25% of the women and students from underrepresented groups in intro classes, and leads to higher grades in CS 1 and higher retention in the CS major. The number of female CS faculty grew from 2 to 5 in the past 5 years, and the number of graduate degrees awarded to women grew from 13% to 22% in the past 10 years.

2. Goals and Activities

In line with UW-Madison practices, we expand on the NSF definition of underrepresented minority to include students from underrepresented Asian nationalities. For representation goals, we select the most qualified individuals and do not reserve spots for individuals with specific demographic characteristics.

Goal G1: Continuously, understand the departmental demographics and experiences of women students and students from underrepresented groups in the CS department.

Activities: **A1:** Establish a departmental DEI committee with research and teaching faculty, staff and student representation (Swift). **A2:** Regularly monitor and report to the department on demographics of CS enrollments, courses outcomes, and degrees (Swift). **A3:** Identify courses with different outcomes for different demographic groups (women, targeted minorities) across instructors of the same course and study potential causes and remedies (Swift). **A4:** Facilitate participation in the Data Buddies climate survey (or others), including encouraging participation and synthesizing and reporting results (Swift).

Goal G2: By 2025, increase undergraduate enrollment of women and students from underrepresented groups by 20% over 2021/22 levels (enrollment is not capped at any number).

Activities: A5: Work on curricular redesign to increase student success in early courses and create pathways to attract more women and students from underrepresented groups into CS majors (Gleicher). **A6:** Work on creating joint majors (CS+X) with other departments with higher representation of targeted groups (R. Arpaci-Dusseau/Swift). **A7:** Advise and expand WES-CS program to more classes and with current best practices to increase participation and beneficial impact on women and students from underrepresented groups (Swift, Kuemmel). **A8:** Develop and/or deliver curriculum for outreach programs targeting students from underrepresented groups, such as WISCIENCE (Branchaw) and STEM Scholars (UW contact:Madera). **A9:** Coordinate with Wisconsin technical colleges (> 27% students from underrepresented groups) to support and smooth the transfer path to a UW CS major (Swift/Gleicher).

Goal G3: By 2025, enroll and retain at least 2 graduate students from underrepresented groups per year through better recruiting/retention.
Activities: A10: Work to recruit more students from underrepresented groups to apply to UW-Madison, such as encouraging admissions practices that broaden participation, reaching out to targeted students and representing UW in the LEAP alliance to increase diversity in CS graduate programs (A. Arpaci-Dusseau). **A11:** Encourage additional direct faculty contact for female graduate students and those from underrepresented groups to build belonging. (A. Arpaci-Dusseau). **A12:** Participate in diversity-focused conferences (Tapia, GHC) to recruit female students and those from underrepresented groups (A. Arpaci-Dusseau). **A13:** Ensure that the admit and enroll rates for female students are not unfairly decreased by the admissions process (A. Arpaci-Dusseau).

Goal G4: By 2025, increase the sense of belonging and success for undergraduate students from underrepresented groups across all CS courses, as measured by surveys, grades and progress towards a degree so that the gap on these metrics between students from underrepresented groups and students from majority groups is below 20%.
Activities: A14: Participate in inclusive teaching training offered by the department, university, or other organizations (Fendrick). **A15:** Facilitate student belonging in class through regular surveys and facilitation of study groups (Swift). **A16:** Perform listening sessions with women and students from underrepresented groups to learn qualitative information about their experiences (Swift).

Goal G5: By 2025, increase direct faculty contact for students from underrepresented groups so that on average each faculty has direct contact with 2 students from underrepresented groups.
Activities: **A17**: Participate in student mentoring programs, such as Mercile Lee Scholars, URS, MacNair, WISCERS (Venkataraman, J. Diakonikolas). **A18:** Advise student groups targeting underrepresented populations, such as WACM or ColorStack UW (A. Arpaci-Dusseau). **A19:** Provide education to faculty on positive mentoring practices for students from underrepresented groups (Swift).

Goal G6: By 2025, increase diversity of CS faculty by hiring (net) 3 female faculty members through better recruiting/retention. **Activities**: **A20:** Actively recruit candidates from underrepresented groups to apply, e.g., by inviting students/postdocs for seminars, participating in diversity workshops at conferences (J. Diakonikolas).

3. Measurement
Goals with direct numeric outcomes (G2-G6) will be evaluated directly on those outcomes. In addition, we will evaluate individual activities. For participation-based activities (A1,A7, A9, A12, A11, A14, A15, A16, A17, A19) we will measure the number and demographics of participants (undergrads, grads, faculty, staff). For activities with curricular outcomes (A6, A7, A8, A9, A10), we will measure the amount of new curricula (courses, modules) created and in use. For climate activities (A2, A3, A4, A15, A16), we will look at actionable information learned - what changes at any level of the department were instituted as a result of the data.