Departmental BPC Plan Computer Science and Engineering Department Washington University in St. Louis



Effective dates of Plan: 12/18/24 - 12/18/26

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1. Context

Washington University in St. Louis ("WashU") is a private, highly selective research university in the Greater St. Louis metropolitan area with an enrollment of 8308 undergraduates and a similar number of graduate students in Fall 2023. Of the populations identified by the NSF as underrepresented in computing¹, WashU has significant undergraduate populations by gender of women students (55% in 2024), and by race/ethnicity of African American ("AA") students (9%) and Hispanic students (13%). We collectively refer to these populations as our "BPC focal groups."

We base our BPC plan on the following 3 considerations:

- In our department, from 2010 to 2023 the percentage of students enrolled in a major who identify as women increased from 11% (20 of 183 students) to 31% (331 of 1056 students)², and in 2022 women earned 32% (88/188) of degrees awarded in these majors at WashU vs. 22% (16,412/74,094) of degrees nationwide³.
- During the same time interval, the percentage of students enrolled in a major who identify as Black/AA, Hispanic, or Multi-Racial Minority⁴ students increased from 6% (18 of 278 students) to 21% (219 of 1056 students), and in 2022 Black/AA, Hispanic, and Multi-Racial Minority students earned 13% (35/276) of degrees awarded in these majors at WashU vs. 19% (13,058/74,094) of degrees nationwide.
- In its Strategic Plan⁵, WashU emphasizes maximizing its positive impact on the St. Louis area. In the six K-12 school districts within 3 miles of WashU, the student population of 29,278 in 2020 (49% women, 69% African American, and 5% Hispanic)⁶.

2. Goals

G1: Undergraduate CSE degree enrollment: Increase declared majors in our department who identify as women to 34% and who identify as Black/AA and/or Hispanic to 23% by 2027.
G2: Outreach to local area: Maintain outreach to local K-12, community college, and HBCU students each year. These students are primarily from our BPC focal groups.

¹ including women, African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, Pacific Islanders, and persons with disabilities

² Source (same for race/ethnicity data): internal WashU data

³ Source (same for race/ethnicity data): IPEDS (https://cerp.shinyapps.io/IPEDS-computing-degrees/)

⁴ Multi-racial minority is a term used in university data for students who report belonging to multiple races and/or ethnicities, at least one of which was African American and/or Hispanic.

⁵ https://strategicplan.wustl.edu/

⁶ Source: National Center for Education Statistics (http://nces.ed.gov/ccd/elsi/)

G3: Welcoming student climate: Increase percentage of undergraduates reporting overall program satisfaction on Data Buddies survey from 64% in 2022 to 70% by 2027, with proportionally-consistent increases among all reported student populations.

G4: Data gathering and assessment: Annually collect and analyze CSE degree program pathway data, seeking areas for improvement such as recruiting and retention of undergraduate students, especially those from our BPC focal groups. Increase Data Buddies Survey undergraduate response rate from < 20% in 2022 to 34% by 2027.

G5: Data sharing and accessibility: Share relevant BPC data and opportunities among department faculty and other relevant stakeholders annually.

3. Activities and Measurement

A1 [G1]: Sponsor and support student groups [BPC Chair]: Provide mentorship for groups whose membership is significantly from our BPC focal groups, such as our Women in CS (WiCS) chapter and our ColorStack chapter. Measurement: Student group membership counts and annual group review by BPC Chair.

A2 [G1]: Support for onboarding new CSE students [BPC Chair]: Co-sponsor events such as workshops focused on helping new CSE students, especially those from our BPC focal groups, build community within the department. Measurement: participant counts and surveys.

A3 [G1]: Sponsor attendance at conferences and events [BPC Chair]: Sponsor students from BPC focal groups to attend technical conferences and large events such as the Tapia Conference and Grace Hopper Celebration. Measurement: participant counts and surveys.

A4 [G4]: Create and implement department data collection/housing strategy [BPC Chair]: Work with relevant WashU offices to track recruiting and retention of CSE students, disaggregating by race, ethnicity, and gender. Measurement: annual verification of data collection.

A5 [G4]: Gather and analyze data to guide future priorities [BPC Chair]: Collect relevant data on undergraduate, graduate, and faculty experiences in the department, and adjust BPC goals and activities as necessary. Measurement: annual BPC Plan review.

A6 [G5]: Make BPC resources available to faculty [BPC Chair]: Maintain a repository that includes our department's BPC Plan and information about ongoing and planned BPC-focused activities, and share with all faculty and other relevant stakeholders. Measurement: annual review and update of repository.

A7 [G1, G2]: Extracurricular outreach [BPC Chair]: With collaborators, promote events (e.g. summer camps) and maintain outward-facing communication (e.g. social media) to attract students, particularly from our BPC focal groups, to computing and/or to our department. Measurement: participant counts, surveys, communication tracking.

A8 [G2]: Curricular outreach [BPC Chair]: Identify and support opportunities for curricular outreach through programs such as dual-degree partnerships, pathways from HBCUs and local community colleges and K-12 teaching modules. Measurement: activity participant counts.

A9 [G3]: Improve climate [BPC Chair]: To encourage faculty adoption of new practices, annually review practices for promoting welcoming, supportive, inclusive interactions with the dept. for all students in areas such as classroom instruction, academic advising, and TA instruction from fellow students. Measurement: Annual review of student responses to surveys such as CRA Data Buddies.