Departmental BPC Plan
Department of Computer Science
Tufts University

Effective dates of Plan: 04/06/2022- 04/06/2024
Contact: Soha Hassoun (soha@cs.tufts.edu) and the CS JEDI (Justice, Equity, Diversity, and Inclusion) committee: *csjedi@cs.tufts.edu*

Context:

Tufts University is an inclusive, student-centered community devoted to excellence in creating, preserving, disseminating, and applying knowledge and ideas. The faculty have a strong shared commitment to diversity as a core value of the Department. Within the department, we have focused on supporting low-income students and first-generation college students. The department also has relatively many women faculty (32% of faculty, and 54% of full professors) and strong Women in CS (WiCS) and Black student groups.

Upon analysis of graduation data, however, it is clear that there is still room for the department to do better at recruiting, retaining, and ensuring the success of all of our students. **Graduation data, averaged over 2014-2019**, computed from https://bpcnet.org/statistics/, show that the number of women graduates at the BS/BA, MS and PhD levels are (7.6%, 6.94%, and 20%, respectively) higher than the national average. Black and African American, Hispanic/Latinx students, however, are (2.74% and 4.76%, respectively) lower than the national BS/BA averages. Further, the 2017-2019 **Data Buddy Surveys** and our **senior focus** group discussions highlight disparate satisfaction levels across student populations. Clearly, we can draw into the major students who identify as women, Black and/or Hispanic/Latinx from the Tufts general population. We can also increase our recruiting efforts from outside of Tufts to recruit students who identify as women, Black, and/or Hispanic/Latinx and/or other populations under-represented in the Computing field for the MS and PhD programs. Further, we can systematically track our diversity and inclusion efforts in order to identify, refine, establish, and update effective recruiting and retaining practices.

Goals:

G1. Build the infrastructure for tracking of all JEDI activities at the micro and macro levels and beginning in 2023, compile the data in an annual document that will be used to update/refine JEDI activities *(Contact: B. Huang)*

> A1a. Develop and implement strategies for evaluating existing curricular programs, such as the Emerging Scholars program and changes to our intro sequence classes, with pre- and post-surveys.
> A1b. Track the diversity & outcomes of our undergraduate research activities.
> A1c. Track undergraduate and graduate program recruiting and retention efforts.
> A1d. Evaluation of JEDI activities, including updating data, analyzing outcomes, reporting to faculty, and making recommendations for changes.
> M1. Monitor collected data and annual evaluation of activity surveys and overall climate changes through Data Buddy surveys.

G2. By 2025, **improve the diversity of our programs** to match or surpass Tufts averages for UGrad, MS, & PhD. Goals: 50% women (currently 30% for UGrad, 37% of MS, 40% PhD), 4% Black (currently 1.45% for UGrad), 7% Hispanic/Latinx (currently 3.87% for UGrad).

A2a. Standardize the offering, intentionally recruit students from underrepresented groups, and perform regular evaluations of one-credit courses or series of events for students' professional development. The courses will be modeled after our current "Emerging scholars in CS", for first year undergraduate students (Contact: R. Townsend). Suggested new topics:
- ○ "How to do research in CS", for 1st/2nd year ugrads. (Contact: S. Hassoun)
- ○ "How to apply for & succeed in a PhD", for 3rd & 4th-year ugrads, MS, and post-bacc. (Contact: E. Short)
- ○ "Career opportunities in CS", 2nd, 3rd year ugrads, and post-bacc (Contact: M. Chow)

A2b. Provide research opportunities for students who identify as women, Black and/or Hispanic/Latinx during the academic year and/or summer, targeting REU participation in proportion to departmental demographics. Tufts has many existing avenues for REU participation; faculty will connect to existing programs whenever possible, for example CRA-WP DREU, ACCESS Computing Scholars, Tufts TRIPODS DIAMONDS program, Tufts Laidlaw Scholars, and NSF REU funding. A new planned activity is Faculty participating in department-level tracking and data collection efforts. (E. Short, F. Dogar, R. Sambasivan)

A2c. Identify, implement, and evaluate three new best practices in recruiting and retaining students who identify as women, Black, and/or Latinx MS/PhD students with computing undergraduate degrees, or from non-traditional CS backgrounds, especially from our existing post-baccalaureate program. (R. Chang, E. Short)

A2d. Work towards creating departmental fellowships for students who identify as Black and/or Latinx graduate (at the MS or MS/PHD level) students. The goal is to have two annual teaching fellowships, with summer research support. (R. Chang)

M2a. Measure impact of each activity vis pre/post surveys

M2b. Track demographics for recruiting and participation.

G3. By 2024, annually educate 100% of faculty and staff and 75% of students (ugrad, MS, PhD) on JEDI values through impactful, measured activities.

A3a. Formalize and scale up integrating JEDI awareness into existing courses to raise awareness of bias in the computing field; design and conduct pre- and post- surveys to measure impact and coverage for our graduating students *(Contact: M. Hughes)*

A3b. Improve, expand, and evaluate existing TA training on JEDI values
(Contact: M. Monroe)

A3c. Augment existing graduate student mentoring or workshops with pre/post evaluations; track impact *(Contact: F. Dogar, J. Foster)*

A3d. Increase participation of staff and faculty in community building around JEDI values and pedagogy through existing and new structured activities; design and conduct pre- and post- surveys to measure impact, with the goal of 100% participation in at least one yearly activity. (*Contact: K. Edwards*)

M3a. Annually evaluate faculty participation through their annual JEDI summaries, and tracking participation.

M3b. Evaluate rates of student participation and activity outcomes via pre/post surveys.