Departmental BPC Plan
Department of Computer Science
Boston University

Effective Dates: 09/28/2022- 09/28/2024
Contact: Abraham Matta, Chair of BU CS

1. Context:

Broadening participation activities within the Computer Science (CS) Department at Boston University (BU) are focused on addressing diversity, equity, and inclusion at both the student and faculty levels. Currently, 30% of all undergraduate CS majors in the department identified as female, 14% of domestic undergraduate CS majors identified as LatinX, and 11% as African American or Black. The BU CS Department is addressing inclusion and equity through its continued support and engagement of the University's students' groups for Under-Represented Populations[1] (URP), its 2019 Building, Recruiting and Inclusion for Diversity (BRAID) Affiliation, and faculty commitments with BU K-12 outreach programs for students from URP. In addition, we plan to address any underrepresentation among faculty members. Currently 27% of our tenure-track faculty are female.[2]

1. Goals

Goal 1: K-12 Outreach – In 2022 and 2023, continue implementation of BU K-12 outreach programs for high school aged girls in K-12 outreach programs including at least the following: LERNet, AI4ALL and PreHacks.

Goal 2: Recruitment & Retention– Increase the number of undergraduate majors and minors who identify as URP in 2023 and 2024. For the remainder of 2022, provide continuing and additional support for curricular and co-curricular programs that improve climate and departmental experiences specifically for URP students.

Goal 3: Research & Experiential learning – By 2024, have every CS student complete an experiential learning course or a directed research project before they graduate BU.

Goal 4: Faculty Search – Continue BU's Diversity & Inclusion mandatory training for faculty search committee chairs and members and start implementing best practices in our searches by 2023.

2. Activities and Measurement

Activity 1: BU's Learning Resource Network (LERNet) delivers a series of programs to local K-12 students. LERNet offers several summer programs that target young women who are interested in STEM, and specifically CS. CS faculty engagement includes overseeing curriculum development and delivery, mentoring student instructors or K-12 students, leading instruction or guest speaking, and hosting students in labs. We will strengthen ties with the Director of LERNet to understand student outcomes from participating in the CS portion of these programs, specifically, as well as how our faculty are contributing. [G1]

Measurement: We will request data from LERNet programs such as AI4ALL and ARTEMIS that survey outcomes for these programs, including demographics, student attitudes and admission into a CS program. We will collect data on the number and range of faculty involved. **Contact:** Cynthia Brossman, Director of STEM Outreach & Diversity, College of Arts & Sciences

Activity 2: PreHacks @ Tech Together: In collaboration with TechTogether, Boston University launched PreHacks to recruit and host hundreds of high school students at TechTogether to demystify hackathons for high school students who identify as girls or non-binary and encourage them to apply to Boston University. The Department of Computer Science continues to maintain this relationship with PreHacks through department sponsorship, faculty judging their Hackathons, and training student instructors. [G1, G2]

Measurement: We will track the profiles of high school and community college students (girls or non-binary, Black/African America, or LatinX) participating in TechTogether/PreHacks and conduct a post-

[1] For this purpose, individuals who identify as one or more of the following: Female, regardless of assignment at birth, African American/Black, Hispanic/LatinX, Native American/Alaskan Native, LGBTQIA+, Disabled.

[2] According to the 2019 Taulbee Survey, 23.9% of Assistant Professors in computing departments are female, whereas it is 44.4% in our department.

event survey to track the percentage who report their intention to apply to a 4-year CS program. We will also track how many participants subsequently apply to and enroll in Boston University. We will collect data on the number and range of faculty involved. **Contact:** Ziba Cranmer, Director of BU Spark!

Activity 3: Supporting and Sponsoring Student Computing Clubs: As part of the effort to foster an inclusive computing community, we will support leaders of student clubs through the Ignite Student Council – a group of student club leaders focused on computing students, e.g., Girls who Code BU, ACM-Women, The Society for Hispanic Professional Engineers, The National Society for Black Engineers. Activities include providing funding to implement events and initiatives that will provide opportunities and support to underrepresented students in CS such as peer mentoring, career development, a student-led DEI in Tech course, and a Civic Tech Hackathon implemented in partnership with Howard University. Faculty engage as club advisors. [G1, G2]
Measurement: Analyze data collected in end-of-year impact reports submitted by student clubs, including leadership demographics, list of activities, number of students reached, and number and range of faculty involved. **Contact:** Ziba Cranmer, Director of BU Spark!

Activity 4: Grace Hopper, Tapia, NSBE, and SHPE Conference Engagement: This activity includes sponsoring students to go to conferences, like Tapia, Grace Hopper, NSBE, and SHPE and having faculty evaluate student applications, attend to support the students and recruit PhD candidates and faculty candidates. [G2, G4]
Measurement: Track the number of BU students and faculty attending conferences and the number of contacts made and ultimate recruitment of URP faculty and students as a result of conference engagement. **Contact:** Christian Cole, BU CS Senior Program Administrator

Activity 5: Research & Experiential Learning @ BU Spark!: Faculty engagement in curriculum development and instruction of practicum courses and externship programs supported by BU Spark! where students are provided with opportunities to work on real-world computing projects with external partners focused on issues of equity, civic tech, and social justice. The Department is integrating these experiential learning programs into its curricular offerings, where faculty serve as instructors of practicum courses, or as mentors, along with industry mentors. [G2, G3]
Measurement: Number of students engaging on projects focused on issues of equity; Participation rates among URP students through course and program registration data, impact results through program evaluation surveys, the climate survey, and number and range of faculty involved. **Contact:** Ziba Cranmer, Director of BU Spark!

Activity 6: DEI in Tech Collective: The DEI in Tech Collective is a multi-department initiative that aims to advance diversity, equity, inclusion, and justice across cognate departments. The Collective will implement an annual town hall to engage in community discussion around the results of the annual climate survey, amplify DEI events and shared initiatives. Faculty engage by serving on the committee and leading data collection and analysis. [G2]
Measurement: Participation rates in annual climate survey and DEI community events. **Contact:** Christian Cole, BU CS Senior Program Administrator

Activity 7: Faculty Recruitment: Increase the diversity among our faculty by targeting LatinX and African American candidates through an emerging scholars program launching in 2022-2023. Faculty engage by participating in the committee, inviting, hosting, and recruiting URP Faculty. [G4]
Measurement: Track the number of faculty participating in recruitment efforts and the number of prospective URP faculty invited and recruited to BU CS. **Contact:** Abraham Matta, Chair of BU CS

Activity 8: Inclusive Curriculum: Continue to revise our introduction to CS sequence to accommodate multiple entries into the major. Expand our X+CS majors to further broaden participation in computing. Faculty engage in curriculum and program development. [G2]
Measurement: Track the number of URP students who major or minor in CS, DRW rates by demographic, attrition by course and instructor, etc. **Contact:** Dora Erdos, Director of Undergraduate Studies