**Departmental BPC Plan**
University of Massachusetts, Boston
Department of Computer Science

Effective dates of Plan: 04/07/2023- 04/07/2025
Contact: Amanda Potasznik, potasznik@cs.umb.edu, Senior Lecturer

Context: The University of Massachusetts in Boston (UMB) is an urban public research university with approximately 16,000 students and 1,100 faculty across 10 colleges. Among the 35 universities, colleges, and community colleges in Boston, UMB is the only public research university. It is the most ethnically diverse public campus in the New England region. About 59% of undergraduates are first-generation college students, many of whom are children of immigrant parents. More than half of the students on campus identify as people of color, and our computer science department welcomes a similar percentage of students of color (SoC) who identify as Black, Latinx, and Indigenous. 58% of undergraduates at the university identify as female. However, women are underrepresented in the College of Science and Mathematics, especially the Computer Science (CS) department. The charts below are based on data for undergraduate students and faculty from Fall 2022:
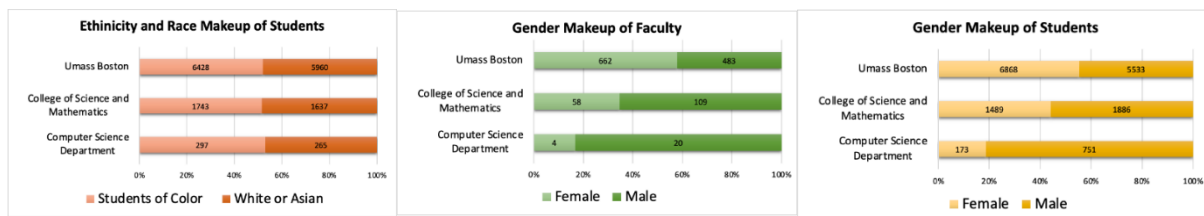
Although SoC are well-represented in our department, we recognize that the underrepresentation of women in computer science is still a prevailing issue. We actively work to maintain an inclusive environment for all and want to understand the causes of the discrepancy between university population ratios and department-level ratios of women. Hypothesized reasons include the potential for improvement in teaching practices, curriculum, and outreach as they pertain to female students and faculty. We also want to ensure that women currently working and studying in our department perceive the environment to be inclusive and welcoming. Therefore, one overarching goal of this BPC plan is to gather data on those practices, policies, and perceptions as they currently exist to further inform and execute a strategy for welcoming more women, both students and faculty, into CS at UMB. Simultaneously, we aim to continue improving the culturally aware environment reflected in our enrollment numbers of SoC. The result will ensure that the entirety of the CS department is abundantly aware of, inclusive for, and welcoming to women and SoC.

G1: Data Collection: By March 2024, collect and evaluate data to identify opportunities to improve gender diversity and inclusion practices, and continue to welcome SoC in all classes in the department. By December 2024, begin implementation of identified opportunities for improvement.
A1a: Conduct a descriptive analysis of the Fall 2022 student evaluations for the single question that is currently linked with inclusion: "Students felt free to ask questions and express ideas" (Potasznik). Secure IRB approval and conduct Participatory Action Research (PAR) in order to ascertain which additional questions would best represent student concerns as they pertain to inclusion of women and SoC in the CS department (Potasznik, Durupinar Babur, Haehn). Include new questions in subsequent student evaluations (Potasznik, administrative staff).
A1b: Review syllabi of all CS courses with a focus on the degree to which best practices for diversity and inclusion are incorporated. Identify policies in our classes that may explicitly or implicitly alienate women and/or SoC, including but not limited to those that may hamper, minimize, trivialize, or undervalue the learning experiences of those students. (Potasznik)
Agree upon and create department-wide boilerplate text that can be easily added to syllabi to ensure universal adoption of key policies. (Potasznik)

M1: Descriptive analysis report, focus group report, inclusion of decided-upon questions in subsequent student evaluations, report on syllabus policies of all CS courses with diversity and inclusion lens, inclusion of boilerplate text in syllabi, outcomes of questions about inclusion on student evaluations.

G2: Outreach, Faculty: By March 2024, conduct a review of the gender makeup of both TT and NTT faculty in the CS department. By December 2024, increase the number of women in applicant pools for new positions.
A2a: Design and conduct focus group study: what led female faculty members to join our department; what suggestions do they have for outreach, recruitment, and retention? (Potasznik)
A2b: Analyze data from A2a for areas that are clearly in need of improvement, such as rate of promotions, hiring outreach, and research opportunities for female faculty members. Begin process of implementing the suggested changes. (Potasznik, Pomplun)
M2: Snapshot report on female faculty, focus group study results; documentation of changes planned and made after review of A2a, number of women applicants.

G3: Outreach, Students: Devise and participate in a departmental outreach initiative to encourage more women to join CS at UMB. By October 2024, recruit and retain 5% more female students.
A3a: Design a plan for departmental outreach. Schedule and participate in faculty meeting(s) for planning; use data from A1a, current programs (e.g., Women in CS club) and neighboring universities for inspiration. (Potasznik)
A3b: Participate in departmental outreach activities such as speaking at area high schools, welcome day events, and first-year success communities, and update departmental website and email communications, fliers and posters around campus, and other publicity measures with the aim of attracting more women to the program. (Potasznik)
M3: Minutes of planning meeting; documentation of student outreach plan; faculty participation in and number of students reached by outreach activities, number of women students recruited and retained.

G4: Research Participation: Increase the number of women students and SoC participating in research experiences. By March 2024, collect and analyze data to monitor student participation in research.
A4a: Collect and analyze data on student research participation, disaggregated by gender. (Potasznik)
A4b: Faculty participate in or serve as mentors in the Sloan fellowship program, a partnership between UMB and UMass Amherst that creates cross-institutional pathways to graduate education for students who are marginalized in STEM. (Haehn)
A4c: Faculty provide research experiences for women students and SoC. Faculty can engage in professional development or self-education (using resources such as NCWIT's REU in a Box or CRA's resources on mentoring and REUs) to ensure experiences are effective and inclusive. (Potasznik)
A4d: Faculty facilitate student attendance at diversity-focused conferences or attendance for women and SoC at research-focused conferences. Funding is allocated to support these activities for faculty without external funding. (Pomplun)
M4: Evaluation results and faculty and student participation in Sloan fellowships; faculty and student participation in conferences; number and demographics of students participating in research experiences; number of faculty incorporating inclusive practices into their research experiences.