

Broadening Participation in Computing Plan
Computer Science Department, Emory University

Verified On
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Effective dates of BPC Department Plan: January 2021 through January 2023

Revision of plan will begin: January 2023.

Contact: Vaidy Sunderam (Department Chair) <vss@emory.edu>

Context: Emory University is a private, research-oriented (R1) university that is highly committed to diversity and inclusivity. The US News & World Report (2019) ranks Emory as fourth in the nation in terms of socio-economic diversity in its student population. Of the freshmen enrolled in Fall 2019, 14% are Black/African American, 13% are Latinx/Hispanic, 13% are International, and 57% are women. The total undergraduate and graduate populations at Emory University are approximately 8,000 and 7,300, respectively.

Computer Science is housed within the Emory College of Arts and Sciences (ECAS) which enrolls 5700 students; ECAS has a makeup similar to the first year demographic mentioned above. In Spring 2021 the Computer Science department had 290 majors and 80 minors, exhibiting a different student body breakdown, with notably smaller proportions of Black/African American and Latinx/Hispanic students, as well as a smaller proportion of women. For example, among CS undergraduates, 6% of the students are Black/African American, 5% are Latinx/Hispanic, and approximately 27% are women. At the graduate level, among the 84 Computer Science and Informatics PhD students, 79% are International students; of the 21% domestic students: 2% are Black/African American, 3% are Latinx/Hispanic, and 33% are women.

These breakdowns are not representative of the surrounding Atlanta metropolitan area where Emory University is located. For example, Atlanta is the second largest majority Black metro area in the country (54% Black/African American). Also, the state of Georgia has the fastest Latinx/Hispanic growth rate of any state in the nation: Georgia's Latinx/Hispanic population increased by 118% between the years 2000 and 2015.

Goals: For the undergraduate, graduate and Computer Science faculty populations, our department's mission focuses on the following goals:

[G1] Increase the proportions of students from under-represented and under-served groups. We will target a 20% increase in undergraduates and graduate students from two groups specifically over the 2021-2023 academic years: women and Black/African American students.

[G2] Foster an inclusive, supportive environment that engenders indistinguishable education and career success amongst all department/program constituents, and across all demographic features.

[G3] Foster an inclusive culture among CS faculty members in particular, with focus on encouraging and rewarding BPC efforts among faculty as well as improving recruiting and retention of women and BIPOC (Black, Indigenous, and People of Color) faculty.

Activities and Evaluation:

1. Undergraduate recruitment and retention [G1]

- a. **ONGOING:** In the Atlanta area: capitalize on existing partnerships with clubs like "Girls Who Code". Emory's "Faculty Speaker Initiative" has partnered with Girls Who Code in the past to have women professors give talks at high schools in the Atlanta area. Our department plans to increase the number of collaborations and events in these venues. **Contact:** Nosayba El-Sayed <nosayba.ae@emory.edu>
- b. **ONGOING:** Expand on the on-going "3+2" joint program between Emory College and Agnes Scott College, a local women's college that does not currently have CS offerings, by planning more seminars to be carried at Agnes Scott College by Emory CS faculty. **Contact:** Nosayba El-Sayed <nosayba.ae@emory.edu>
- c. **NEW:** Leverage the College of Arts and Sciences' general education requirements intended to promote inclusivity on campus, such as the newly mandated "Race and Ethnicity" course. We plan to form a committee in our department that identifies (and/or designs) one or more CS courses aligned with this College requirement and also ensures that this requirement is part of our department's messaging and advertising campaigns. **Contact:** Emily Wall <emily.wall@emory.edu>
- d. **Success metrics:**
 - Absolute and relative growth in representation of women and Black/African American students.
 - Retention/graduation rates of Black/African American and women students to match and exceed general student body.

- Rate of enrollment in the new GER requirement “Race and Ethnicity”. Students evaluations and feedback/reviews will be analyzed to measure impact.

2. Community building [G2]

- ONGOING:** Leverage student clubs for engendering inclusive, welcoming environments that help mitigate isolation by creating friendly spaces for formal and informal discourse, for “like cohorts”. Our CS faculty are currently formally advising clubs like “ProgramHers” and “The Women’s Network (TWN),” while offering support and mentorship to its executive members, and even participation in the club’s events. **Contact:** Davide Fossati <davide.fossati@emory.edu>
- ONGOING:** The CS department is also committed to identifying conferences and workshops that target and support BIPOC and women students, such as Grace Hopper Celebration of Women in Computing, Tapia, or the CRA graduate cohort. The CS department currently provides scholarships to students interested in these events. **Contact:** Joyce Ho <joyce.c.ho@emory.edu>
- Success metrics:**
 - Rate of student participation in community-strengthening events organized by clubs that cater to BIPOC and women students in the department (e.g. game nights, hackathons).
 - Rate of faculty participation in BPC efforts, including participation in community-strengthening events.

3. Faculty engagement [G2][G3]

Foster sustained, inclusive culture by facilitating adoption of known best practices:

- ONGOING:** Add structure and formal, procedural methodologies to processes like recruiting, mentoring, retention and professional development at all levels. This includes formalizing mentoring for early and midcareer BIPOC and women faculty, in particular. **Contact:** Dorian Arnold <dorian.arnold@emory.edu>
- NEW:** Add explicit BPC category to faculty *annual reporting and evaluation* rubric, e.g. what BPC activities have faculty engaged in over the past year.
- NEW:** Add faculty incentives for BPC efforts, e.g. merit raises, student research lines, etc. **Contact:** Vaidy Sunderam <vss@emory.edu>
- NEW:** Develop a course that broadens Equity, Diversity and Inclusion (EDI) awareness within the discipline. The CS department has recently recruited a faculty member whose research area is in computational bias; we plan to leverage the outcomes and findings of this faculty member’s research to enhance our curricular activities and support the development of the EDI course. **Contact:** Emily Wall <emily.wall@emory.edu>
- Success metrics:**
 - Rate of enrollment in the new EDI-focused course. Students evaluations and feedback/reviews will be analyzed to better evaluate course impact.
 - Development and offering of CS courses addressing Bias and Equity e.g. Bias in Artificial Intelligence and Data Visualization, and enrollment therein.
 - Rate of participation in BPC activities by CS faculty, including participation in mentoring activities.

4. Graduate recruitment [G1]

- ONGOING:** Reach out to HBCUs in the Atlanta area to conduct graduate-school recruiting activities targeting Black/African American students. These activities include visiting HBCUs to give talks about the research areas our faculty are engaged in, as well as inviting HBCU students for on-campus visits, to have them interact with faculty and graduate students in the CS department at Emory. **Contact:** Vaidy Sunderam <vss@emory.edu>
- NEW:** An annual open house in late fall specifically targeting the recruitment of BIPOC and women students from local and regional colleges, with application fee waivers and fast tracking for attendees. **Contact:** Dorian Arnold <dorian.arnold@emory.edu>

5. Topical Seminars and Workshops [G2]

- ONGOING:** Increase the rate of special seminars, workshops and trainings that focus specifically on BPC-related issues and remedies. **Contact:** Dorian Arnold <dorian.arnold@emory.edu>
- Success metric:**
 - Number of such events held per semester.
 - Rate of student and faculty participation in these events.

In addition to the evaluation metrics mentioned above, to continuously evaluate the success of our departmental BPC plan, we will periodically survey student and faculty populations using best practices. More specifically, we plan to utilize the “Data Buddies” program, while adding custom questions that help us measure the effectiveness of our activities.