

**Departmental BPC Plan
School of Computer Science
Carnegie Mellon University**



Effective dates of Plan: 02/28/2023- 02/28/2025

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1. Context

Carnegie Mellon University, located in Pittsburgh, PA, is a private research university with approximately 14,800 students and 1,500 faculty. The School of Computer Science (SCS) at Carnegie Mellon University is top-ranked for research and teaching (currently ranked 2nd by the US News & World Report). The undergraduate program offers an accredited bachelor of science (B.S.) degree in computer science, artificial intelligence, computational biology, and human-computer interaction. As of 2022, SCS is at above the university’s average in percentage of women (51% SCS, 44% overall) and above average in groups traditionally underrepresented in computing (Black, Hispanic, American Indian, Alaskan Native, Native Hawaiian, or Other Pacific Islander) (14% SCS, 9% overall). The goal of this BPC plan is to continue successful strategies and identify new ones to continue this trend.

CMU student demographics	Fall 2022			Fall 2021			Fall 2020		
	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths
Women	7,405	44	44.1	6,900	44	43.6	6,183	44	43.6
Men	9,374	56	55.9	8,918	56	56.4	8,006	56	56.4
Total	16,779	100	100	15,818	100	100	14,189	100	100

CMU student demographics (BIPOC includes Black, Hispanic, American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander)	Fall 2022			Fall 2021			Fall 2020		
	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths
BIPOC	1,439	9	8.6	1,365	9	8.6	1,217	9	8.6
Non-BIPOC	15,340	91	91.4	14,453	91	91.4	12,972	91	91.4
Total	16,779	100	100	15,818	100	100	14,189	100	100

CMU UNDERGRADUATE student demographics	Fall 2022			Fall 2021			Fall 2020		
	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths
Women	3,797	51	51	3,684	50	50.4	3,511	50	50.3
Men	3,650	49	49	3,624	50	49.6	3,471	50	49.7
Total	7,447	100	100	7,308	100	100	6,982	100	100

CMU UNDERGRADUATE student demographics (BIPOC includes Black, Hispanic, American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander)	Fall 2022			Fall 2021			Fall 2020		
	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths	Count	Percent	Percent to the tenths
BIPOC	1,025	14	13.8	949	13	13	866	12	12.4
Non-BIPOC	6,422	86	86.2	6,359	87	87	6,116	88	87.6
Total	7,447	100	100	7,308	100	100	6,982	100	100

2. Goals, Activities, and Measures

Carnegie Mellon’s School of Computer Science aims to create a diverse, inclusive environment for all our stakeholders. In 2018, we implemented some changes to course prerequisites and

applications of basic computing which helped to increase the numbers of female students in our undergraduate program. This plan will help us understand what strategies have been successful, and to leverage them to inspire new efforts to increase faculty participation in BPC efforts. Specifically:

- **Goal 1a.** By 2023, establish baseline measures for the diversity of CMU UG students in computer science. We propose to examine race, gender, SES, and diversity of high school as initial measures of diversity.
- **Goal 1b:** By 2024, collect data on *sense of belonging* and *growth mindset* and analyze this data to understand how strategies we have applied from 2018-2022 affect these measures for undergraduate women and those from underrepresented racial and ethnic groups in computer science.
- **Goal 2.** Each year, obtain participation by at least 50% of faculty in key college BPC activities, some of which are outlined here, others available in a repository.
- **Goal 3:** By 2024, increase the percentage of women and students from underrepresented groups in SCS to 55% women, 20% underrepresented groups.

3. Activities and Evaluation

A1 (G1): (Veronica Peet) Collect and maintain the following quantitative undergraduate student data: demographics; admissions; matriculations; graduations for our four undergraduate major programs (CS, Comp Bio, AI, HCI). Collect and maintain data on sense of belonging and growth mindset. *Measurement:* Completeness/scope of data collected; accessibility and use of data.

A2 (G3): (Jodi Forlizzi) Develop undergraduate student scaffolding programs, events, and conferences focused on 1) tutoring and 2) undergraduate research experiences. *Measurement:* # of new programs developed, # and demographics of students participating in these programs, # students who participate who join/stay in CS majors.

A3 (G2): (Byron Martin) Survey of faculty SCS-wide to assess their knowledge of, and participation in, BPC and DEIAB activities. Create and implement a just-in-time awareness module about ways to get involved. *Measurement:* #/% response rate, % participation in “key activities”.

A4 (G2): (Jodi Forlizzi) Design and implement a learning experience for faculty and teaching assistants to increase awareness and effectiveness of teaching methods to broaden participation and increase diversity and inclusion. *Measurement:* Increase in student climate/sense of belonging, # of courses employing these strategies, # of TAs and faculty who participate in the learning.