

Departmental BPC Plan
Department of Computer Science
Georgia State University (Atlanta, GA)



Effective dates of Departmental BPC Plan: 09/22/2022- 09/22/2024

Contact: Anu G. Bourgeois, BPC Committee Chair (abourgeois@gsu.edu)

1. Context

Georgia State University (GSU) is an R1 public research university, with over 52,000 students. It is a national leader in graduating students from myriad backgrounds, ranking 1st among non-profit, non-HBCU U.S. universities to confer bachelor’s degrees to Black or African Americans. The main campus is located in downtown Atlanta, where the population is 49.79% Black or African American.

The Department of Computer Science (CS) hosts two undergraduate majors (Computer Science and Data Science) and offers Master’s and Ph.D. degrees. Enrollments for Fall 2022 (as of 8/1/2022) are shown in the table below. The CS program is the most popular undergraduate major on campus in terms of total enrollment. Pre-majors must achieve a certain GPA in a specific set of CS and Math classes to advance to the major. Previous data shows that over 55% of our undergraduate pre-majors and majors are Pell-eligible, reflecting exceptional financial need. This is in line with GSU being ranked 11th in the nation in terms of advancing social mobility and having 25% of students being first-generation.

Fall 2022 Data	Undergraduate Enrollment		Graduate Enrollment	
	Female	Male	Female	Male
Hispanic	82	230	≤5	≤5
Non-Hispanic	691	1,894	133	181
American Indian	≤5	11	≤5	≤5
Asian	325	885	114	149
Black / African Americans	285	660	≤5	9
Native Hawaiian / Pacific Islander	≤5	≤5	≤5	≤5
White	102	427	13	19
2 or more races	50	101	≤5	≤5
Not reported	23	66	≤5	≤5
Total	~790	~2150	~136	~187
TOTAL	2940		323	

When looking closer at the retention/graduation data, we see inequities across demographics and when compared to overall GSU graduation data. Black students have a 46.7% and 21% 1st- and 2nd-year retention rate respectively, compared to a 62% and 40% for all CS students. The following are 6-year graduation rates for CS students compared to GSU students: 26% vs 57.8% for female students; 16% vs 53.6% for Black students; 35% vs 58.7% for Hispanic students; 27% vs 48.8% for White students; and 34% vs 55.1% for Asian students.

For the purpose of this plan, under-represented groups (URG) in computing include students who identify as women, American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander. Over half of students belong to one or more URGs. 63% of students from URGs are Pell-eligible.

2. Goals, Activities, and Evaluation

G1: Data collection. By Summer 2024, design and implement a data plan that will allow us to collect, report, and regularly discuss findings from data with respect to our BPC plan to monitor progress, help identify issues, and gain insight as to why we are not retaining and graduating our Black and female students at a comparable rate as White and Asian males. We will also assess our retention and graduation status of low-income students by race, ethnicity, and gender.

A1a: Faculty work with administrative staff to collect, process, and analyze course enrollments, pre-major and major matriculation numbers, along with demographic data. (Bourgeois)

A1b: Faculty determine retention/performance across demographic groups for their own classes and submit data to an internal reporting tool. (Yanambaka)

M1: Track faculty involvement in data collection and analysis process.

G2: Undergraduate Student Experience. By Fall 2025, collect and increase participation rates by 20% in research and affinity group participation for students from URGs.

A2a: Faculty proactively recruit and mentor students from URGs in undergraduate research. (Ji)

A2b: Faculty mentor members of affinity groups/clubs towards outreach to newly admitted students from URGs. (Glebova)

A2c: Faculty visit with student affinity groups and help them reach more students by relaying information to their classes. (Patterson)

M2: CRA's annual Data Buddies survey, data related to student participation, and number of students engaging in funded research.

G3: Graduate Student Diversity. By Fall 2025, we will increase the enrollment of graduate students from racial/ethnic URGs from 4.1% to 6.1%.

A3a: Faculty budget funding in research proposals to support undergraduate research with students from URGs, as early research experience increases likelihood to pursue graduate studies. (Zelikovsky)

A3b: Faculty hold seminars to increase recruiting from our undergraduate students to our graduate programs. (Cai)

A3c: Faculty engage in collaboration efforts with nearby HBCUs and identify students for potential recruitment into the graduate program. (Zhang)

M3: Year-to-year demographic data for various cohorts – applicant pool, research participation, and specific faculty collaboration outreach.

G4: Inclusive Teaching. By 2025, all faculty and teaching assistants will learn about inclusive teaching practices and a minimum of 70% of faculty will adopt inclusive practices in their teaching methods.

A4a: Faculty participate in meetings that address diversity and inclusion. Meetings can be at the department, university, community or professional level. (Y. Li)

A4b: Faculty complete inclusive teaching training courses, e.g. offered through Coursera or EdX. (Angryk)

M4: Track data related to faculty participation and number of faculty trained. Include faculty BPC efforts as part of annual evaluations.

G5: K-12 Outreach. Develop a collaborative partnership with GSU and local public K-12 schools to create sustainable K-12 CS education outreach programs in communities including many people from URGs in Georgia.

A5: In collaboration with the statewide non-profit consortium CS4GA, participate in outreach programs that expose K-12 students from URGs to computing topics towards inspiring interest in computing. (Weeks)

M5: Sustained CS education programs in 1-3 local public schools serving primarily students from URGs; review student surveys to measure learning outcomes.