

Departmental BPC Plan
Department of Computer Science
George Mason University



Effective dates of Plan: 12/07/2021- 12/07/2023

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1. Context

George Mason University (Mason), a Carnegie R1 university, is Virginia’s largest and most diverse public university and the fastest growing public university in the nation, with 38,630 students. With nearly 2800 students and 68 faculty, the Department of Computer Science (CS) is the largest and fastest growing department within the School of Computing and the broader College of Engineering and Computing (CEC). Over the last decade, there has been a steady increase in the proportion of CS undergraduates who are female or from underrepresented groups (specifically African Americans and Hispanics). Nevertheless, the proportion of students from these groups does not yet match the demographics of Mason or the Commonwealth of Virginia.

The table below presents key demographic statistics about Virginia (VA, 2010/2020 US Census), and about the undergraduate population of Mason, CEC and CS (Fall 2011/2021 GMU Census).

Years	Women				African-American				Hispanic			
	VA	Mason	CEC	CS	VA	Mason	CEC	CS	VA	Mason	CEC	CS
2010 Fall 2011	50.9%	52.0%	16.6%	12.1%	19.2%	9.0%	7.7%	5.1%	7.3%	10.2%	9.0%	7.0%
2020 Fall 2021	50.8%	49.6%	23.1%	19.9%	20.9%	11.4%	10.9%	8.6%	10.5%	16.4%	11.4%	9.0%

2. Goals

G1: Increase the *proportion* of women undergraduate students from 20% to 23% within 3 years and to 33% within 10 years.

G2: Increase the *proportion* of African-American and Hispanic (AH) undergraduate students from 18% to 21% within 3 years and to 27% within 10 years.

G3: Increase the *number* of female and AH undergraduates engaging in research activities by 25% within 3 years and by 100% in 10 years.

3. Activities and Measurement

A1: Cross-cutting Initiatives (G1, G2, G3)

- A1a: convene a standing BPC Committee in the CS department that is responsible for working with faculty and staff to achieve the department’s BPC goals (contact persons: CS Department Chair, CS Director of Inclusive Computing (who serves as the committee chair))

- A1b: create a new position for the functions of collection and analysis of data related to student performance and retention and hire a staff member to fill this position. (expected date: AY 2021-22; contact persons: CS Department Chair, School of Computing Divisional Dean)

A2: Recruitment (G1, G2)

- A2a: hire additional staff to support personal outreach to admitted women and AH students and for active CS recruitment from communities of color around the region. (contact persons: CS Department Chair, CS Director of Inclusive Computing, School of Computing Divisional Dean)
- A2b: develop new concentrations for the BS in Applied Computer Science that can attract students from the more-diverse university population (contact persons: CS Department Chair, CS Associate Chairs for Undergraduate Studies, School of Computing Divisional Dean)
- A2c: engage with NOVA ADVANCE program (a community college pathway partnership with the Northern Virginia Community College System) to ensure CS participation in the successful transfer of two-year students into the Mason degree completion timeline (contact persons: CS Associate Chairs for Undergraduate Studies)
- A2d: invite high-school students from the DC Metropolitan Area for on-campus activities such as robotics and data analytics competitions (expected date: 2022; contact person: CS Director of Inclusive Computing)

A3: Retention (G1, G2)

- A3a: reform the sequence of introductory CS courses to be more inclusive regardless of CS exposure (expected date: ready for first delivery by AY2022-23; contact persons: CS BPC and Undergraduate Studies Committee Chairs)
- A3b: engage with student chapters of the Society of Women Engineers, NCWIT, Women of Color in STEM, Society of Hispanic Professional Engineers to promote CS research and educational opportunities (contact person: CS Director of Inclusive Computing)
- A3c: support attendance of faculty and students at Tapia, Grace Hopper, Anita Borg, Girls in Tech Catalyst, Wonder Women Tech, Global Tech Women Voices and Grad. Cohort Conferences. (contact persons: CS Director of Inclusive Computing, CS Department Chair)
- A3d: establish peer mentorship and cohort models for AH and women students supported by faculty and undergraduate advisors (contact person: CS Director of Inclusive Computing)

A4: Research Engagement (G4)

- A4a: incentivize faculty to mentor AH and women students in research projects funded via extramural grants (e.g., NSF REU site, NSF REU supplements, NSF NRT grants) and internal funding from Mason's Office of Undergraduate Student Scholarship (OSCAR) (contact persons: CS Department Chair, CS Faculty, School of Computing Divisional Dean)

Measurement

- measurements of demographic shifts in the CS undergraduate student population relative to the university undergraduate population, with respect to admission, acceptance, graduation and retention **(G1, G2, A1, A2, A3)**
- the percentage of students engaging in research/mentoring, as measured through the CRA Data Buddies Survey and custom faculty surveys **(G3, A4)**