

**Departmental BPC Plan
School of Computing
Clemson University**



Effective dates of Plan: 12/07/2022- 12/07/2024

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1. Context

Clemson University is a public R1 university in South Carolina with 21.7K undergraduate students, 5.7K graduate students, and 1.4K faculty. Clemson consistently ranks in the top 30 US public schools. The School of Computing (SoC) is housed in the College of Engineering, Computing and Applied Sciences (CECAS). CECAS’ DEI activities are coordinated by the Programs for Educational Enrichment and Retention and Women in Science and Engineering (PEER/WISE). SoC has a standing committee on Broadening Participation in Computing responsible for coordinating and evaluating BPC activities and maintaining an updated plan.

Comparing its demographics to CECAS, SoC aims to specifically focus on increasing its efforts to recruit women at the undergraduate level, Hispanic students at the Masters level, women at the PhD level, and African American (AA) and Hispanic faculty. To get closer to state-level percentages, SoC aims to further focus recruitment on women (+ other gender identities), AA, and Hispanic persons at all levels (incl. faculty).

CECAS students from underrepresented groups (URGs = AA, Hispanic, Native American/Native Hawaiian or Pacific Islander) have lower progress and graduation rates. SoC aims to improve these rates.

Data: Dec 2021	Male	Female	URG	non-URG
% Y1 completion	90.4	95.3	86.9	92.5
% 4Y graduation	40.2	61.4	30.6	48.1
% 6Y graduation	79.9	90.1	67.0	85.2

Data: Dec 2021	State	CECAS				SoC			
		UG	Masters	PhD	Faculty	UG	Masters	PhD	Faculty
# total		5,512	764	721	317	1,059	146	122	52
# US residents		5,466	430	305	295	1,044	67	53	45
% Woman	51.6	24.2	28.6	38.4	23.4	17.4	31.3	28.3	31.1
% African American	27	5.6	6.3	8.9	3.4	8.5	9	7.5	*
% Hispanic	6	7.3	5.3	6.2	3.1	7	*	7.5	0
% Native American	0.5	0.1	*	0	0	*	0	0	0
% Native Hawaiian or Pacific Islander	0.1	0.1	*	*	0	0	0	*	0

Note: % African American, Hispanic, Native American a Native Hawaiian/Pacific Islander are calculated as % of US residents. % Woman percentages are calculated as % of total.

*) percentages representing < 5 persons have been suppressed for privacy protection reasons.

2. Goals (G), Activities (A), and Measurement (M)

G1: Create and implement an annual systematic data collection and reporting plan by 2023.

A1 (Knijnenburg): Faculty can opt to become part of the standing SoC BPC Committee, which will implement data collection and reporting plans for SoC to report on annual changes in the numbers presented above. Additional data will be collected regarding students and faculty with disabilities. The committee will also collect data from peer programs (source: BPC public plans, CRA Data Buddies) as a comparative metric. An annual report will be produced by September

of each year, informing the BPC goals of the upcoming academic year. The second report will additionally inform the school's next BPC plan.

M1: An annual report will be produced with the first report disseminated by 9/23.

G2: Engage more faculty with existing efforts to increase the outreach to and the recruitment of undergraduate students who identify as women and/or are from URGs (goal: have 20% of SoC research faculty involved in one of the programs listed below by the 2023-2024 academic year).

A2 (Serita Acker, Director of PEER/WISE): Faculty can participate as mentors, speakers, or in other capacities with activities organized by PEER/WISE, including but not limited to the WISE summer camp (audience: middle school girls), the PEER SnapShot recruitment day (high school students from URGs), and the WISE Choice recruitment day (high school girls). The BPC Committee will encourage involvement in these programs among the SoC faculty.

M2: Ms. Acker will track [a] faculty engagement in the PEER/WISE programs and [b] the numbers and demographics of students involved in these programs, and report bi-annually to the BPC committee by January and July of each academic year.

G3: Hire undergraduate research assistants (URAs) who identify as women (goal: 50% by 2024) and/or are from URGs (goal: 25% by 2024) to increase their participation in research and to encourage and support their applications for graduate school.

A3 (Knijnenburg): Faculty with eligible grants will apply for REU funds and recruit URAs who identify as women and/or are from URGs. The BPC Committee will keep a list of recruitment sources (e.g., HBCU faculty) and provide students and faculty with resources to help make their research experience more meaningful. Faculty will encourage graduating URAs to apply for a Masters or PhD at Clemson or elsewhere.

M3: The BPC committee will collect data on the demographics of hired URAs at the end of each financial year. A question on the SoC graduate admissions forms will measure the extent to which these undergraduate research experiences increase SoC's ability to recruit graduate students from URGs. Furthermore, participating faculty will be asked to track which of their URAs end up applying to (and attending) graduate school elsewhere.

G4: Collect annual research data among all student cohorts (goal: at least one participating required course per grade level) to support the retention and graduation rates of undergraduates who identify as women and/or are from URGs.

A4 (Knijnenburg): The SoC has an ongoing NSF IUSE grant (PI: Knijnenburg) to study factors influencing the retention of Black undergraduates at Clemson. Faculty who teach undergraduate courses may support this research through the following activities: administer a "perceptions of identity and support" survey among students in their class; include 1-2 standardized questions in their exams; hold an interview about their teaching practices with the IUSE research team.

M4: This goal is met when the IUSE team is able to track each student cohort with all three activities on a yearly basis (this target goes beyond the goal of the IUSE grant).

G5: Establish research partnerships with HBCUs that involve co-advising of PhD students from URGs. (goal: have 20% of SoC research faculty involved such partnerships by 2024).

A5 (Brian Dean, SoC Director): Participating faculty will work with faculty and students at HBCUs on existing projects and grant proposals. The BPC Committee will keep a list of potential partners. Faculty will encourage graduating PhDs from URGs to apply for faculty positions at Clemson and/or elsewhere.

M5: The SoC Director will collect data on the number and nature (e.g. funding source, project status, number of students involved) of HBCU collaborations at the end of each Spring semester. A question on the SoC faculty application forms will measure the extent to which these collaborations increase SoC's ability to recruit faculty members from URGs. Furthermore, participating faculty will be asked to track which of the students in their projects end up applying for (and taking) academic positions elsewhere.