Departmental BPC Plan
Department of Computer Science & Engineering (CSCE)
Texas A&M University (TAMU)
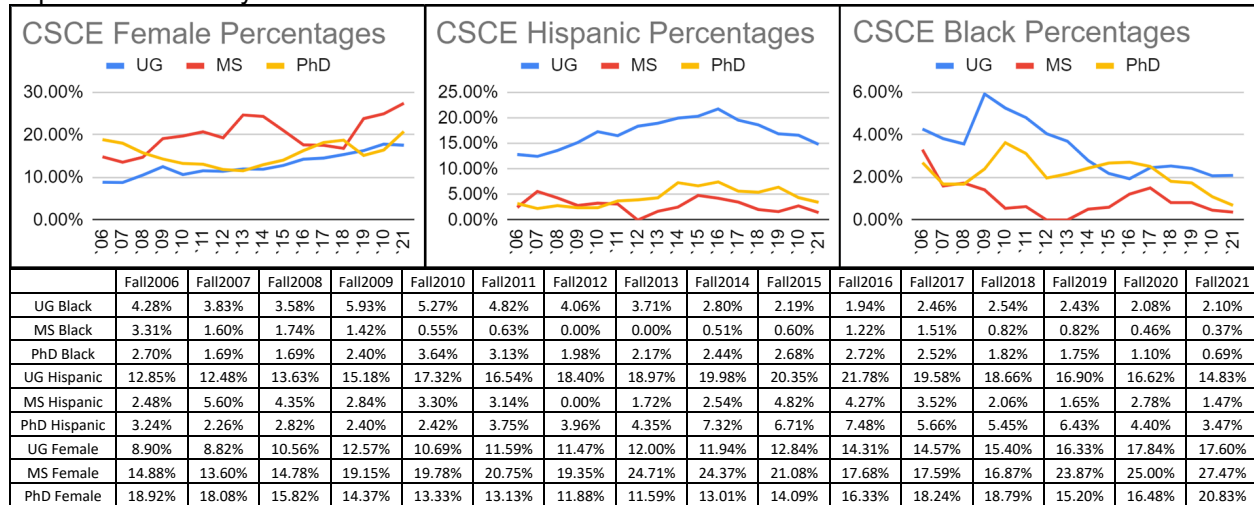
Effective dates of Plan: 01/05/2022- 01/05/2024
Contact: DEI Committee & Chair Dr. Hammond dice,hammond@cse.tamu.edu

1. Context & Data

TAMU has over 71,000 enrolled students. The CSCE Dept. resides within the College of Engineering (CoE) and is one of its largest (and growing) departments. Our undergraduate (UG) majors are split across a B.S. in Computer Science (CS), a B.S. in Computer Engineering (CE) (shared jointly with the Dept. of Electrical & Computer Engineering), and a B.A. in Computing. ***Texas' graduating high school class as of 2018 is approximately 50% female (F), 48.8% Hispanic (H), 12.5% Black (B), and 30% White (W).*** As of Fall 2020, TAMU is 46.6% female and 25.2% Hispanic UG students; the CoE is 22% female and 21.8% Hispanic UG students. B.S. students are admitted as first year engineers and apply for entry to a major (ETAM) typically at the end of their first year. ETAM began in Fall 2014 and has been correlated with a significant decline in Hispanic enrollment in CSCE since its inception. In Nov. 2020, the students created the Aggie Hispanics in Computing (AHIC) student affinity group. The department currently has 107 students with disabilities.

	Fall2006	Fall2007	Fall2008	Fall2009	Fall2010	Fall2011	Fall2012	Fall2013	Fall2014	Fall2015	Fall2016	Fall2017	Fall2018	Fall2019	Fall2020	Fall2021
UG Black	4.28%	3.83%	3.58%	5.93%	5.27%	4.82%	4.06%	3.71%	2.80%	2.19%	1.94%	2.46%	2.54%	2.43%	2.08%	2.10%
MS Black	3.31%	1.60%	1.74%	1.42%	0.55%	0.63%	0.00%	0.00%	0.51%	0.60%	1.22%	1.51%	0.82%	0.82%	0.46%	0.37%
PhD Black	2.70%	1.69%	1.69%	2.40%	3.64%	3.13%	1.98%	2.17%	2.44%	2.68%	2.72%	2.52%	1.82%	1.75%	1.10%	0.69%
UG Hispanic	12.85%	12.48%	13.63%	15.18%	17.32%	16.54%	18.40%	18.97%	19.98%	20.35%	21.78%	19.58%	18.66%	16.90%	16.62%	14.83%
MS Hispanic	2.48%	5.60%	4.35%	2.84%	3.30%	3.14%	0.00%	1.72%	2.54%	4.82%	4.27%	3.52%	2.06%	1.65%	2.78%	1.47%
PhD Hispanic	3.24%	2.26%	2.82%	2.40%	2.42%	3.75%	3.96%	4.35%	7.32%	6.71%	7.48%	5.66%	5.45%	6.43%	4.40%	3.47%
UG Female	8.90%	8.82%	10.56%	12.57%	10.69%	11.59%	11.47%	12.00%	11.94%	12.84%	14.31%	14.57%	15.40%	16.33%	17.84%	17.60%
MS Female	14.88%	13.60%	14.78%	19.15%	19.78%	20.75%	19.35%	24.71%	24.37%	21.08%	17.68%	17.59%	16.87%	23.87%	25.00%	27.47%
PhD Female	18.92%	18.08%	15.82%	14.37%	13.33%	13.13%	11.88%	11.59%	13.01%	14.09%	16.33%	18.24%	18.79%	15.20%	16.48%	20.83%

2. Goals

G1: Increase the enrollment of students from underrepresented minority (URM) groups (i.e., people who identify as women, Black, and/or Hispanic, and people with disabilities) in the TAMU CSCE UG and graduate majors and minors by 5% by 2024.

G2: Understand retention and attrition among underrepresented groups in computing by 2024. This data will be used to guide subsequent BPC Plans.

G3. Promote a culture that values diversity and underrepresented groups, including students with disabilities, resulting in an improvement in the results of the department survey in A6 each time it is given.

3. Activities and Measurement

A1: Support students interested in computing from URM groups in their first year (G1-UG). Many students from URM groups are first-generation students, and as such, they may not be as prepared for their first year in college. The department will: a) Encourage CSCE faculty to support their students' time to participate in the peer first-year tutoring and mentoring programs run by student affinity groups, e.g., AHIC. b) Provide workshops (run by our student affinity groups) to help first-year students with the ETAM essay and application process. c) Provide workshops targeted at first-year students describing the CSCE majors and job opportunities and information on the various affinity groups available in CSCE. d) Recruit first-year students to attend research open-house information sessions. e) Recruit URM students at first-year information sessions. f) Invite peer teachers (which have better URM student representation) to participate in the recruitment efforts. g) Invite student affinity groups to speak about their experiences during the first year Introduction to CSCE seminar course. *Measurement: Participation counts in activities; departmental URM student enrollment statistics.*

A2: High school outreach (G1-UG) The department will: a) Recruit at high school outreach events. b) Encourage faculty to visit and give talks at Texas high schools with high URM student representation. *Measurement: Participation counts; departmental URM student enrollment statistics.*

A3: Summer bridge programs (G1-UG) Create student-run BPC-focused summer bridge programs for students (with funding support by the department and participation by the faculty) a) Interested in computing that need additional support before entering the university, b) Coming from the Engineering Academies community college partnership, and c) Focused on URM MS and PhD students (an expansion of our current graduate student bootcamp). *Measurement: Participation counts; departmental URM student enrollment statistics.*

A4: Seek diverse applicants for tenure-track faculty search (G1-Faculty, G3). The department will encourage faculty participation in ASSETS, Grace Hopper, Tapia, and similar conferences to recruit faculty and show the department's dedication to BPC. *Measurement: faculty participation and presentation count; URM faculty/PhD contacts, URM faculty applications received, & hired.*

A5: Track retention and attrition rates for our faculty and students (G2) The department will track retention and graduation rate data by student cohort disaggregated by race, gender, student level, and how students enter the program (internal/external transfer, direct admission). Faculty retention and attrition will be measured similarly. *Measurement: Demographic attrition and retention data*

A6: Climate surveys for students, staff, and faculty in our department (G2). To effectively reflect and respond to student, staff, and faculty attrition, the department will a) Produce a climate survey every two years, with the student affinity groups providing feedback about the survey questions. b) Provide the aggregated anonymized results to the entire department, c) Hold yearly town halls for each population to discuss results and plans of action. *Measurement: survey and town hall participant count.*

A7: Create a mentoring program that includes semesterly one-on-one faculty/staff chats, targeting participation by our URM students (G3). Each semester, each student that chooses to participate will have a 15-minute one-on-one chat with a trained faculty or staff member to see how the student is doing academically, mentally, and socially, and how the department could better support them, referring them to mental health support or other resources as appropriate. As students may prefer to meet with someone from their own identity group, the student will be able to provide a preference with whom they meet with from the (identity-group labeled) list of faculty and staff each semester. *Measurement: number of one-on-one meetings completed each semester.*

A8: Update our curriculum to include activities to improve cultural awareness (G3). We will work to include at least two activities that will improve student cultural awareness in all required CSCE courses. *Measurement: number of activities implemented.*

A9: Support communities of practice (CoP) to aid faculty interested in inclusive teaching practices (G3). The TAMU Institute for Engineering Education & Innovation (IEEI) and the TAMU Center for Teaching Excellence (CTE) have CoP that support faculty in creating more inclusive teaching environments, including equity and justice talks and BPC book clubs. The department will encourage faculty participation in those and other IEEI community events with Prairie View A&M (PVAMU), a local HBCU without a CS PhD program; and encourage TAMU & PVAMU faculty to serve on each other's graduate committees. *Measurement: faculty participation count.*

A10: More research activities for URM students (G1, G3). Faculty will engage URM students in research. *Measurement: URM research participant counts.*

A11: Increase participation of URM students in the TA population (G1, G3). In an effort to ensure that our TA population is diverse and ensure that our URM MS students have the needed funds to attend graduate school, the department will a) Adjust our TA selection process to consider items other than faculty request or recommendations, supporting holistic review. b) Encourage URM students to apply for TA positions. *Measurement: Diversity of the TA population.*

A12: Acknowledgement of BPC activities on the annual faculty review (G3). The annual faculty review memo letter from the department head will acknowledge faculty BPC activity. By listing BPC activities along with teaching, research, and service, the department will emphasize the importance of these activities and better encourage faculty participation in the above activities. Additionally, this will encourage faculty to list their activities in their yearly faculty progress report (FPR), allowing for measurement of the above items. *Measurement: number of faculty including BPC information in their annual FPR; number of department head faculty annual review memo letters that acknowledge a faculty member's BPC activities.*