Broadening Participation in Computing (BPC) Plan
Department of Computer Science & Engineering (CSE)
Texas A&M University, College Station, TX

Effective Dates of Plan: 04/16/2024 - 04/16/2026
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1. Context and Data

Texas A&M University (TAMU) is a land-grant school located in College Station, Texas and is the flagship campus with other campuses (e.g., Galveston and McAllen, Texas; Qatar, the Texas A&M Law School in Fort Worth, Texas). As of fall 2023, TAMU has 77,491 enrolled students, with 16.8% identified as first-generation to attend college. The Department of Computer Science and Engineering (CSE) is the second largest department of the fifteen departments in the College of Engineering (CoE), with an enrollment of 2,215 (not including freshmen). In the College of Engineering, more than 56% of first-generation college students identify as people from groups the NSF defines as underrepresented in computing versus less than 19% among continuing-generation students. Aligned with the NSF goals, we focus on first-generation college students in this plan.

The Department of Computer Science and Engineering (CSE) administers degree programs on the College Station and Galveston campuses. The department offers two Bachelor of Science (B.S.) degrees, one in Computer Science and one in Computer Engineering (administered together with the Department of Electrical and Computer Engineering (ECE)), and one Bachelor of Arts (B.A.) in Computing. All B.S. students in the College of Engineering are initially admitted as first-year engineering students and apply for entry to a major (ETAM), typically at the end of their first year. All B.A. students are admitted directly into the Computing major. The department supports several student organizations including the Aggie Hispanics in Computing (AHIC) and Aggie Women in Computing (AWICS). Further, CSE Faculty support the student chapter of TAMU oSTEM, which focuses LGBTQ+ individuals in STEM fields.

We seek to promote and foster a classroom, department, college, and university culture that values broadening participation in computing.

2. Goals

G1: Measure and annually increase the participation of middle and high-school students whose parents did not attend college in activities and programs that expose them to education and career opportunities in computing.
G2: Measure and annually increase the enrollment of first-generation students in the TAMU CSE undergraduate and graduate programs.
G3. Measure and annually increase retention of first-generation students in the TAMU CSE undergraduate and graduate programs.

Activities and Measurements

A1: Recruit potential students (G1, G2). The CSE Department hosts an annual event to educate and expose potential students to computer science from local schools, which is attended by many potential first-generation students. Participants are surveyed before and after the event to gauge student interest in computer science and to improve subsequent CS Day events. *Measurement: survey; faculty/industry participation; departmental URG student enrollment statistics.*

A2: Support first-generation students interested in computing in their first year (G1). Many students may need additional support during their critical first year, including help with studying, understanding what is expected in college, and developing a support network. The CSE Department encourages students to participate in the peer first-year tutoring and mentoring programs. This may be particularly impactful for first-generation college students who have less knowledge of how to successfully navigate college. *Measurement: Demographics collected annually of first-generation students from entering the CSE program, proceeding throughout the program, and finishing the program.*

A3: Attend broadening participation in computing-related conferences: (G2, G3) . CSE typically sponsors the *CMD-IT ACM Richard Tapia Celebration of Diversity in Computing Conference* and the *Grace Hopper Celebration of Women in Computing Conference*. The department allows all students to apply for support and sends many students to these conferences. *Measurement: student and faculty involvement.*

A4: Increase the number of first-generation students in the Teaching Assistant (TA) and Peer Teacher (PT) population (G1, G3). Faculty will actively recruit first-generation college students to apply to be a TA or PA. *Measurement: First-generation students who participate as TAs or PTs in the CSE Department.*

A5: Conduct summer Outreach programs (G1). We lead summer outreach programs, focusing on first-generation students throughout Texas with active faculty participation and opportunities for funded research for such students. *Measurement: Participation counts; departmental first-generation student enrollment statistics.*

A6: Incorporate BPC content in the CSE curriculum (G3). Look for opportunities throughout the curriculum to include Broadening Participation in Computing-related content to improve student awareness. *Measurement: number of activities reported.*