

Departmental BPC Plan
School of Computer Science and Computer Engineering
University of Southern Mississippi



Effective Dates of Plan: 01/03/2025 - 01/03/2027

Contact: Dr. Sarah Lee, Director and Professor, sarah.b.lee@usm.edu

1. Context

An R1 doctoral research university, the University mission states, “The University of Southern Mississippi engages students at all levels in the exploration and creation of knowledge. Our hallmark is a fully engaged lifelong learning approach integrating inspired teaching, collaborative research, creative activity, and service to society. Southern Miss produces graduates who are ready for life; ready to succeed professionally and as responsible citizens in a pluralistic society.”

The University of Southern Mississippi School of Computing Sciences and Computer Engineering is focused on delivering the essential skills that drive career success for our diverse student population.

What sets us apart is our commitment to faculty-student engagement, multi-disciplinary learning, cutting-edge research, and deep industry partnerships. Our graduates are **Ready for Life**.

The School of Computer Sciences and Computer Engineering (CSCE) offers bachelor’s degrees in computer science (CS), applied CS, information technology, computer engineering, and cybersecurity. At the graduate level, CSCE offers a master’s and PhD in CS.

Enrollment figures from Fall 2024 for the University were as follows:

- Of 10,316 undergraduate students, 62.4% overall were women, and 27% were Black/African American
- Of 3046 graduate students, 65.7% overall were women, and 22% were Black/African American

Fall 2024 School of CSCE enrollment totaled 978. Representation across that enrollment included: 867 undergraduates (22.7% women, 25% Black/African American) and 111 graduate students: (34% women, 6.3% Black/African American).

The School of CSCE commits faculty and staff resources to increasing the number of women and Black/African American students at the undergraduate level and supporting the transition of those students to graduate school and/or the workforce. School leadership is committed to increasing enrollment in computing majors to reflect the diversity of Mississippi, which is approximately 40% Black/African American.

2. Goals

In the USM School of CSCE, we seek to maintain a student-engaged learning environment in which all persons are welcomed and encouraged to achieve excellence in their educational and career pathways. We listen to and celebrate all voices.

Specific, measurable goals are noted below:

- G1: Increase the number of undergraduate women across CSCE undergraduate majors to 30% by 2027.
- G2: Increase the number of undergraduate Black/African American students across CSCE majors to 40% by 2027.
- G3: By 2027, we will publish results from a longitudinal analysis of activities designed to recruit and retain women and Black/African American students in the School.

3. Activities and Measurements

- A1: Activities to Support Student Recruitment and Engagement (G1, G2)
 - a. Mississippi Aspirations in Computing Award Program, in Collaboration with the National Center for Women and Information Technology to engage high school women, genderqueer and nonbinary students, Contact Person: Ms. Soundra Newson, soundra.newson@usm.edu
Measurement: survey of participants following awards event; tracking of participants who matriculate to the School of CSCE using NCWIT's Entry Survey for College Majors
 - b. Maintain an active community of student participants in the Women in Cybersecurity student chapter, Contact Person: Dr. Aleise McGowan, aleise.mcgowan@usm.edu
Measurement: maintain numbers of faculty and student participants and the number of events by semester to track growth
 - c. Maintain an active community of student participants in the Louis Stokes Mississippi Alliance for Minority Participation, Contact Person: Mr. Terry Cullum, terry.cullum@usm.edu
Measurement: maintain records of participation to track growth, tracking transitions to industry and graduate school following graduation

- A2: Providing co-curricular support for CSCE students; these have been shown in previous research to be especially useful for women and Black/African American students (G1, G2)
 - a. Provide access to mentors for students among staff and/or faculty, Contact Person: Mr. Danny Coats, danny.coats@usm.edu
 - b. Maintain a drop-in tutoring center for computing majors staffed with peer-tutors, Contact Person: Mr. Danny Coats, danny.coats@usm.edu
Measurement: Require tutor and mentors to keep a list of tutoring/mentoring meetings to track volume; annual survey of students to determine level of access to and quality of tutoring and mentoring services

- A3: Data Driven Continuous Improvement of BPC Activities (G3), Contact Person: Dr. Wonryull Koh, wonryull.koh@usm.edu
 - a. Increase marketing of the CRA Data Buddies survey among students to increase data about departmental climate.
 - b. Implement surveys to gain input from students' participation in activities to measure impact on recruitment and retention. Publish a longitudinal analysis of these data.
Measurement: Annual report to the faculty with BPC activities assessment and evaluation of BPC goals, setting new ones as appropriate.