Departmental BPC Plan
Computer Science and Engineering (CSE) Department
University of California, Riverside

Effective dates of plan: 09/25/2024 - 09/25/2026
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1. Context

The University of California, Riverside (UCR) is an R1 research institution that serves the region of California known as the Inland Empire. The Inland Empire is an economically disadvantaged region that lags in educational achievement and economic opportunity. UCR has been a Hispanic Serving Institution (HSI) since 2008 (38% Chicano/Latino) and 49% of students are first-generation.

The Department of Computer Science and Engineering (CSE) resides within the Bourns College of Engineering (BCOE) and offers several undergraduate degree programs. The department created a Broadening Participation Committee (BPC) in 2021 which will work toward and track the outlined goals.

In this document, URG refers to people who identify as African American, Black, Hispanic, Latinx, Native American, Native Alaskan, Native Hawaiian, Pacific Islander, and/or Indigenous.

UCR	BCOE
Undergraduate (22,055, 54% W, 45.1% URG)	Undergraduate (2864, 23.6% W, 32.7% URG)
Graduate (3,493, 45.4% W 19.2% URG)	Graduate (936, 26.4% W, 8.9% URG)

Undergraduate		Graduate	
Degree	Total Enrollment	Degree	Total Enrollment
Computer Science (B.S.)	799 (16.9% W, 22.7% URG)	Computer Science (M.S.)	143 (21.6% W, 3.5% URG)
Computer Engineering (B.S)	258 (15.9% W, 31.8% URG)	Computer Engineering (M.S.)	49 (20.4% W, 6.1% URG)
CS with Business Application	120 (22.5% W, 18.3% URG)	Computer Science (PhD)	183 (23.5% W, 3.2% URG)
Data Science (B.S.)	88 (25% W, 8% URG)	Robotics (MS)	13 (15% W, 23% URG)

2. Goals:

G1: Recruitment and Retention: Increase the number of women enrolled in our undergraduate programs (B.S. in Computer Science, Computer Engineering, Computer Science with Business Applications, Data Science, and the new Robotics program) to 25% by 2027.

G2: Data Collection: Annually, collect and report participation and demographic data to understand the effect of various interventions and activities.

G3: Undergraduate Research: By 2027, increase the number of women and students from URGs participating in undergraduate research programs / activities by 25% compared to 2022 (activities associated with Goal 2 include collection of data needed to benchmark this goal).

G4: Graduate Recruitment : Increase the enrollment of women and students from URGs by 5% across graduate programs within CSE by 2027.

3. Activities

A1: (G2) : Analyze data to identify and understand demographic differences in admission, persistence and outcomes. [Dr. Salloum, Dr. Shinar].

A2: (G1, G2) : Participate in a subcommittee to examine the existing introductory course pathway with the goal of increasing the major's accessibility and appeal to a diverse range of students, including understanding learning gaps between student groups. [Dr. LePendu, Dr. Salloum, Dr. Watkinson Medina, Dr. Knight].

A3: (G4) : Participate in a subcommittee to create B.S. + M.S. pathway in Data Science and Robotics to encourage students to pursue graduate studies. [Dr. LePendu, Dr. Salloum, Dr. Tsotras, Dr. Watkinson Medina]

A4: (G2) : Participate in data collection efforts including CRA's Data Buddies and NCWIT Data Report to better understand UCR trends over time. [Dr. Salloum]

A5: (G3,G4) : Involve UCR undergraduate students from URGs and women to get involved in research and provide research methods training opportunities. Faculty can supervise undergraduate research projects through programs like UR2PHD [Dr. Salloum; Dr. Knight] or CAHSI [Dr. Shinar]

A6 : (G1) : Support transfer students (with varying computing backgrounds) by holding a yearly non-credit Bridge course that will review concepts needed to transition to UCR. [Dr. LePendu]

A7 : (G1) : Financially support the hiring and training of Undergraduate Learning Assistants (ULAs) for tutoring lower division courses with particular focus on retention of women and students from URGs. [Dr. Watkinson Medina]

A8 : (G1) : Faculty will support hackathons like RoseHack (a women centric hackathon) to address recruitment and retention of women and students from URGs . Faculty can serve as speakers, mentors, or lead workshops. [Dr. Salloum]

A9 : (G1) : Support the Data Science Academy to teach Data Science to high school students (emphasis on recruiting women and students from URGs) [Dr. LePendu].

A10 : (G1) : Support student organizations (like Women in Computing (WINC) by holding workshops, participating in judging, etc. [All faculty]

A11 : (G4): Participate in the CalBridge program (a program that supports students from URGs in the Cal State System to pursue PhDs) by serving as a UC-mentor to advise CalBridge scholars on grad school applications, CS research areas, etc. or by sponsoring a CalBridge scholar over the summer to conduct research. [Dr. Salloum]

A12 : (G1): Participate in the curriculum and course creation as well as teaching courses that support multidisciplinary tracks (CS with Applications Major) with the aim of increasing the enrollment of women and URG students in computing [Dr. Watkinson Medina].

A13 : (G1): Participate in a subcommittee to evaluate updating/adjusting math and physics requirements for CSE programs with the goal of opening more pathways for students from URGs. [Dr. Shinar/LePendu]

A15 : (G1): Launch ScholarsXL program, a hands-on engagement for scholarship recipients, and advance other goals of the NSF S-STEM award.   [LePendu, Shinar, Salloum, Knight, Watkinson]

4. Measurement

E1: Track faculty participation and numbers/demographics of students participating in the above activities.

E2: The BPC committee will track student data holistically (from application to graduation) with specific attention to equity in admission and understanding retention issues of women and URGs..

E3: A yearly presentation on BPC activities will be made to the advisory board and will include the opportunity for private discussion and feedback directly to the chair of the BPC committee and departmental leadership.

E4: The BPC committee will conduct an annual review of progress on the goals in this document and provide a presentation at the annual faculty meeting.