

**Departmental BPC Plan
Computer Science
Wayne State University**



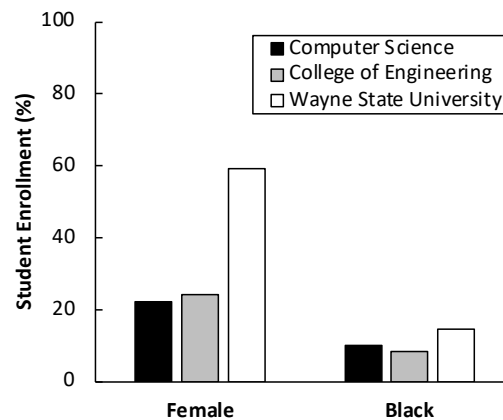
Effective dates of Plan: 06/23/2022- 06/23/2024

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1. Context

Wayne State University (WSU) is a public research university in Detroit, Michigan. It is Michigan's third-largest university. Founded in 1868, Wayne State consists of 13 schools and colleges offering approximately 350 programs to nearly 25,000 graduate and undergraduate students. The Computer Science Department is part of the College of Engineering. It offers core academic strength in many areas including mobile computing, artificial intelligence, bioinformatics, data mining, machine learning, networking, databases, distributed and parallel computing, computer security, computer graphics, and software engineering. The proposed activities will take place at WSU and involve Metropolitan Detroit's broader community.

Detroit has a relatively high percentage of Black residents, at 82%. However, as the side figure shows, WSU student enrollment for academic year 21/22 contrasts sharply with Detroit's demography. In the Computer Science Department, College of Engineering, and WSU only 10%, 8%, and 15% of students identify as Black, respectively. In addition, while 59% of students enrolled at WSU identify as female, the situation is reversed in both the Computer Science Department and College of Engineering, where only 22% and 24% of the students are female, respectively. The following activities and goals aim at improving over the next two years the enrollment, retention, and participation in computer science of students from groups that are underrepresented in computing, including (but not limited to) female and Black students.



2. Goals

G1: Each year, increase recruitment and retention of female and Black students in the Computer Science Department of WSU until we match the percentages of WSU.

G2: Beginning Summer 2023, annually evaluate the effectiveness of summer camps for recruiting female and Black students to WSU.

G3: Each year, increase the participation of female and Black high-school students in summer camp and other outreach activities until their percentage matches or surpasses that of male and white students.

3. Activities and Measurement

A1: [K-12, G1, G3] Develop new outreach activities (e.g., summer camps) for high school students and teachers at Detroit Public Schools, Novi Community School District, Northville

School District, Plymouth/Canton Community School District, and other communities. Use a dedicated trolley as Computer Science/Mobility Outreach Bus. Projects will focus on activities that are inclusive and appealing to a broad range of students and be based on the heterogeneous strengths of the department and on the specific interests of the faculty involved. Measurement: number of faculty participating, number of activities, number of students--by race and gender-- participating in each activity. General Faculty Advisor: Weisong Shi

A2: [ORGS, G1] Work with, mentor, and advise WSU chapters that promote diversity such as the National Society of Black Engineers (NSBE), the Society of Hispanic Professional Engineers (SHPE), the Society of Women Engineers (SWE), and the Association for Computing Machinery Women (ACM-W) to encourage the participation of enrolled students from underrepresented groups. Measurement: variation of number of students enrolled in the above WSU chapters over subsequent semesters. General Faculty Advisor: Weisong Shi

A3: [CLUBS, G1] Increase the diversity of WSU students involved with existing clubs including (but not limited to) the Cyber Defense Club (CDC) and Wayne Robotics Club (WRC). Advertise the clubs through the chapters of WSU that promote diversity (NSBE, SHPE, SWE, ACM-W). Measurement: demographics of participating students. General Faculty Advisor: Weisong Shi

A4: [PAIR, G1, G3] Pair undergraduate students of the existing WSU clubs including (but not limited to) the CDC and the WRC with high school students from local schools, with a particular emphasis on reaching female and Black students. Use a dedicated trolley as Computer Science/Mobility Outreach Bus. Measurement: number and demographics of participating high school students. General Faculty Advisor: Weisong Shi

A5: [REU, G1] Create/obtain funds for NSF Research Experiences for Undergraduates (REU) Site to sustain the participation of undergraduate female and Black students in research activities. Measurement: number of students – by race and gender—participating in REU funded activities. General Faculty Advisor: Weisong Shi

A7: [DB, G2] Evaluate the effectiveness of summer camps for recruiting female and Black students by creating a database to track whether participating high school students go on to enroll in computer science at WSU. Measurement: database created and used to evaluate the effectiveness of summer camps in enrolling female and Black students at WSU. General Faculty Advisor: Weisong Shi

A8: [TITLE3/4, G1, G3] Apply for the WSU-eligible Title III/IV grant programs including the Asian American Native American Pacific Islander Serving Institutions Program (AANAPISI Part A 031L, AANAPISI Part F 382B) and the Strengthening Institutions Program (SIP 031 A/F) to fund efforts to support diversity in our undergraduate program. Measurement: tracking grant funds obtained, and initiatives funded. General Faculty Advisor: Weisong Shi

A9: [Alumni, G1] Broaden the appeal of computing to prospective students by documenting the variety of career paths pursued by alumni. Create and distribute a survey to alumni, conduct interviews with a diverse group of alumni, and post the information gathered on the department's website. Measurement: number of alumni that participated in the survey; number of interviews conducted and published on CS website. General Faculty Advisor: Weisong Shi