

Departmental BPC Plan
Department of Computer Science and Technology
Kean University



Effective dates of Plan: 10/26/2023 - 10/26/2025

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1. Context

Kean University, one of seven public comprehensive colleges and universities in New Jersey, has more than 12,000 undergraduate and graduate students. Kean is located 30 minutes from New York City, in Union, NJ, near Newark airport, a densely populated urban area. The Department of Computer Science and Technology integrates outstanding teaching with small class sizes and an emphasis on undergraduate research throughout the seven undergraduate degree options offered. Over 63% of Kean students receive need-based financial aid. Kean was designated as a Hispanic Serving Institution (HSI) in 2017. The Department of Computer Science and Technology has 13 faculty members (AY 22-23), of which approximately half are female.

At the undergraduate level, in the Fall 2022 semester:

- The Department of Computer Science & Technology includes 704 students (AY 2022-2023), with 119 (17%) female students and 416 (59%) from groups underrepresented in computing, primarily Hispanic and Black students.
- Female students received 17% of the BS CS and IT degrees conferred in 2022.
- The number of students from groups underrepresented in computing has been consistent or increasing annually, with 230 (33%) identifying as Hispanic and 186 (26%) identifying as Black.
- Overall, Kean undergraduates are 61% female with 60% from underrepresented groups, 36.8% Hispanic/Latino, 20.8% Black/African American, and 2.4% Two or More Races

We want to increase the **percentage of female students enrolled in CS/IT**, while maintaining or increasing the percentage of students from groups that are underrepresented in computing.

At the graduate level, the MS CIS program is approximately 30% female students and 50% students from groups underrepresented in computing. Female students received 33% of the MS CIS degrees conferred in 2022.

2. Goals, Activities and Measurement

G1: **Increase** the enrollment of female CS/IT undergraduates to reach 25% by 2025.

A1: Host NJ NCWIT Aspirations in Computing (AiC) celebration annually. [Kumar/Diplan]

M1: Number of faculty participating in the NCWIT AiC effort.

M2: Number of NCWIT AiC Awardees (students, high school educators).

A2: Modify introductory courses to use inclusive practices, a common syllabus, common assessments (measures) and growth mindset teaching for all sections of CPS 1231, 2231 (CS0, CS1) to ensure that the student experience in the major is consistent and students are well-prepared for success in subsequent courses. [Kwak, Kumar, and faculty teaching CPS 1231, 2231].

M1. Percentage of students retained in CPS 1231, 2231.

M2. Number of non-transfer students graduating, including women.

M3. Number of faculty using growth mindset materials in teaching.

A3: Departmental Webpage: Faculty guide the design and development of a webpage to promote the department's BPC activities, scholarships, and research opportunities for female students to help with recruiting. [Huang]

M1. Number of people visiting the webpage

M2. Number of female students participating in BPC activities through the webpage.

G2: Increase female participation in undergraduate research (including independent study and Local REU project) from 17% (2022-2023) to 25% by 2025.

A4: Undergraduate Research Workshop: Faculty host a half-day research workshop for undergraduates to encourage their interest in doing research. Faculty will personally encourage female students to attend. [Huang, Ayad]

M1. Number of female students attending this workshop.

M2: Number of faculty participating.

M3. The demographics of CS/IT major students participating in the campus' Research Days.

G3: By 2025, more than 80% of CS faculty will have completed an Inclusive Teaching in STEM training program offered by edX or another similar course/training.

A5. Faculty complete an edX and/or other course to become familiar with Inclusive STEM teaching methods. [Franke]

M1. Number of faculty who received course invitations.

M2. Number of faculty have taken the training and received certificates.