

BPC Plan
College of Information Sciences and Technology
Penn State University

Effective dates of Plan: October 1, 2025 – September 30, 2027

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1. Context

The Pennsylvania State University (PSU) is a land-grant institution serving Pennsylvania with multiple campuses and internationally with the World Campus. Penn State's College of Information Sciences and Technology (IST) offers several undergraduate and graduate degree programs in applied computing. This BPC Plan supports IST at University Park, Penn State's largest campus, and IST's World Campus, Penn State's online program. In 2025, the College formed three departments but maintained its singular doctoral program and many centralized programs. For this reason, this BPC covers all three departments.

An overarching aim of our BPC plan is to inform and communicate with faculty and others our goals and strategies for developing an inclusive college environment. We aim to redefine, build, and boost inclusive research, teaching, learning, and work environment for faculty, staff, and students. Representation is one element of inclusivity, and our data suggests the following trends.

From 2021 to 2025, generally, IST's student population declined in its percentage of women, first-generation and domestic students, but increased in its percentage of underrepresented students. IST's percent of women graduate students decreased from 35.8% (n=66) to 29.1% (n=71). At the same time, the percent of women undergraduate students slightly decreased from 24.9% (n=429) to 24.6% (n=485). By comparison, the population of Pennsylvania is 50.7% women. IST student population data includes a percentage of students from underrepresented populations in computing (UPiC) including Black/African American, Hispanic/Latinx, and Indigenous/Native American groups. From 2021 to 2025, IST saw an increase in percent of all students from UPiC from 10.9% (n=188) to 15.1% (n=244) for undergraduate students; graduate student percentages were maintained in the same time span but are under 5% (specific numbers withheld to preserve anonymity). Also, from 2021 to 2025, IST saw a slight decrease in percentage of first-generation undergraduate students from 17.2% (n=296) to 16.5% (n=324). During the same time span, there was a decrease in first-generation graduate student enrollment from 4.3% to 2.9%. It is important to note that identification of first-generation is self-reported data. In addition, domestic student enrollments from 2021 to 2025 saw a decrease from 89% to 86% for undergraduate students and 20% to 16% for graduate students.

Below we articulate a set of goals (G) which are then a series of related activities (A). These goals are informed by the context of U.S. higher education, demography, U.S. federal policy trends, among others. Some elements of the context are orthogonal – for instance, the demographic cliff requires outreach to non-traditional student populations (broadly defined) at the same time federal policies create constraints. Likewise, increased emphasis on our university's land grant calls for increases in focusing on Pennsylvanian students at the same time we experience the so-called demographic cliff.

2. Goals for the BPC Plan Period (Taken from the IST Strategic Plan)

G1: Engagement of the next generation of scholars: By August 2028 IST faculty and staff will engage in twenty activities to develop a robust and therefore diverse pipeline for the future STEM workforce. These activities will target several existing external K-12 programs, such as undergraduate recruiting, and organizations wherein at least half of the participants are first generation domestic students.

G2: Cultural Consciousness: Build a culturally conscious and competent work environment within IST to improve the college climate from baseline data collected in October 2020 in which 18% of students reported feelings of exclusion based on some aspect of their identity. Ensuring a college climate that fosters a cultural and STEM identity is significant for persistence and self-perception. Therefore, by December 2026, data will be collected to measure changes in college climate.

G3: Increased representation of First Generation and Domestic students: By August 2027, we will increase the percentages of first-generation graduate and undergraduate students to 5% and 25%, respectively; increase the percentage of domestic undergraduate and graduate students to 94% and 30%.

3. Activities

A1: IST Inclusion Awareness Training [G2; E1], Jocelyn Bennett Garraway: Faculty will complete cultural competency training offered by Penn State, such as the Advancing Meaningful Diversity in the Workplace module, or another on-or-off-campus related training.

A2: President's Postdoctoral Fellowship Program (PPFP) [G1; E2, E3], Cynthia Brewer: As a participating College in the President's Postdoc Fellowship Program, which focuses on research, teaching, and service, faculty will recruit postdoc scholars and leverage the University's inclusive hiring training.

A3: Undergraduate and Graduate Student Course Assistant Training [G1, G2; E4], Erica Fleming: Recognizing the role of peer leaders in establishing a culture of inclusivity and mutual respect, training for undergraduate and graduate teaching assistants includes resources to develop their understanding and professional abilities in inclusion. Faculty can supplement this training by implementing specific activities with teaching assistants in the classroom.

A4: Be You In Tech Conference [G2; E2, E3], Madhavi Kari: IST will offer an annual conference for IST students on bringing themselves to the workplace with a focus on being inclusive and welcoming to all. Faculty will attend and participate as speakers and moderators during the conference.

A5: IST Student Organizations [G1; E2, E3], Katie Frist: 25 student organizations lead several initiatives to support belongingness and STEM identity development in the College including professional development opportunities, leadership training, career development, professional conference attendances, STEM project engagement and national technology competitions. Faculty will participate in these events.

A6: Inclusive Teaching Articles and Training [G1, G2; E1, E4], Chris Gamrat & Roderick Lee: IST faculty have published several articles and resources for inclusive teaching. This effort will continue and be bolstered through additional faculty partnerships, training sessions, and teaching pilots. Faculty will continue to implement the insights reflected in these peer publications.

A7: HBCU/Hispanic-Latinx Serving Institutions Partnerships [G1, G2; E2], Jocelyn Bennett

Garraway: As part of our outreach efforts, IST faculty can participate in the partnership programs and research collaborations which connect IST faculty to students and faculty at HBCU/HSI institutions mutual enhancement of research capacities.

A8: Undergraduate Research Activities [G1, G3,; E2, E3], Carleen Maitland:

Growing the percentage of domestic graduate students requires developing a pipeline of domestic undergraduate researchers.

The college offers a 1-credit seminar for first and second-year students to prepare them for entering a faculty research group/lab. The college also participates in the Computing Research Association (CRA)

UR2PHD program, contributing ideas and insights for supporting undergraduate research. The college

also offers a 400-level course to prepare students for writing their undergraduate theses. The college

offers several integrated graduate and undergraduate programs (IUGs) that can facilitate graduate

studies.

A9 Millennium Scholars [G1; E2, E3], Amy Freeman:

IST participates in a university-wide program to recruit undergraduates interested in a Ph.D. after completing their undergraduate degree, emphasizing

recruiting students “who are committed to increasing the diversity of professionals in STEM-related

disciplines.” Faculty participate as interviewers and research advisors.

A10: K-12 Student and Teacher Engagement [G1; E1], Angela Miller:

Faculty will accompany staff on visits to external programs (i.e., Girl Scouts of the USA, PA school districts) to engage in hands-on IST

activities and partner with schools to offer to teachers classroom takeover experiences and other

resources focused on cutting edge technology with real-world implications. Activities and materials are

designed to increase the appeal of computing to a broad range of students.

A11: Nittany AI Alliance [G1; E1, E2, E3] Daren Coudriet

The Nittany AI Alliance teams with industry partners to create meaningful student engagement

opportunities focused on new artificial intelligence solutions, services, and outreach projects. The Nittany

AI Alliance creates programs that bring together students, faculty, staff, and industry leaders to address

real-world problems through experiential learning projects using artificial intelligence–based solutions.

A12: IST Chaiken Center for Student Success [G1, G2; E1, E2, E3] Tyler Estright

The IST Chaiken Center is a safe and welcoming space that supports students as they navigate their

educational experiences and develop their STEM identity. The Center offers academic, career and

personal/social support and resources. Faculty will serve as a resource offering mentorship, academic

success guidance, and STEM related learning opportunities through the Center. (by using Center

community space,