

**Departmental BPC Plan**  
**Electrical Engineering and Computer Science Department**  
**Massachusetts Institute of Technology**



**Effective dates of Plan:** 10/21/2024 - 10/21-2026

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**1. Context**

The Department of Electrical Engineering and Computer Science is the largest department at MIT, annually preparing hundreds of graduate and undergraduate students for career leadership in fields such as academia, research, and the high-technology industry. Per IPEDS, MIT awarded 387 bachelor’s, 79 master’s, and 287 doctoral degrees in Computer Science 2022-2023. The table below shows the percentages of women, Hispanic and Black recipients for this period.

Demographics	Bachelor’s Degrees			Master’s Degrees			Doctoral Degrees		
	Pct %: MIT CS	Pct %: National I CS	Pct %: MIT	Pct %: MIT CS	Pct %: National I CS	Pct %: MIT	Pct %: MIT CS	Pct %: National CS	Pct %: MIT
<b>Women</b>	39%	23%	46.4 %	20.2%	34%	39.2%	38.7 %	26.4%	33.3%
<b>Hispanic/ Latino/a</b>	17%	11.8%	14.5 %	1%	3.8%	6.2%	5.9%	2.2%	5%
<b>Black/ African American</b>	5.4%	8.7%	5.43 %	2.5%	4.5%	3.6%	2.8%	4.6%	<1%

National and MIT CS data comes from IPEDS. General MIT numbers were generated by MIT’s office of institutional research. (CIP category code 11: Computer and Information Sciences and Support Services)

Representation of women is improving (for example, 43% of tenure-track faculty members are women and the percentage of CS undergraduates who identify as women is steadily increasing and exceeds the national average), however women undergraduates remain underrepresented relative to the full MIT demographics. (This comparison is important because once admitted to MIT, undergraduates are free to choose any major.) At 17%, representation of Hispanic undergraduates in CS is greater than for MIT and the national average, however, for Hispanic students in other CS degree programs and for Black students overall, representation remains in the single digits.

Throughout this plan, HUGs (historically underrepresented groups) will be used to refer to people who identify as American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander.

**2. Goals**

G1: Increase the percentage of women and undergraduates and graduate students from HUGs to match the MIT demographics in 5 years

G2: Within 3 years, 50% of faculty (that participate in searches) are educated on best practices for equitable faculty search processes and search committees identify faculty advocates to keep the practices in use and relevant.

G3: Within 5 years, increase the number of students from HUGs served by our summer programs by 10%.

G4: In 3 years, increase our application pool of students from HUGs by 10%

G5: In 5 years, increase accessibility to CS by growing enrollment in on-ramp classes by 20%

### 3. Activities and Measurement

**A1: Grad Admissions and Application Updates** [G#1] Within their subarea, faculty can implement the seven recommendations of the EECS ad hoc committee for improving the grad admissions and application process. [M] EECS will track: Impact of additional essay question, admissions demographics, distribution of scores after the rubric pilot, impact of first semester fellowships on yield. Contact: L. Kolodziejcki

**A2: Rising Stars** [G #1]: MIT EECS created the Rising stars in EECS workshop series to encourage top early-career women to explore life in academia. Faculty plan, run, and act as mentors within this program. [M] EECS tracks the number and demographics of participants reached and their outcomes in the field. Contact: M.Vabulas

**A3: Thriving Stars** [G #1]: Faculty plan, run and act as mentors with Thriving Stars, a program that was launched in 2021 to impact the representation of women and underrepresented genders in the EECS's PhD program. [M] EECS tracks: impact of the program on enrollment and persistence, number of activities offered, the number and demographics of participants reached, their progress in the program and their long-term outcomes, the number of faculty participants, and the experience of the students in the program via survey. Contact: L. Kolodziejcki

**A4: Summer Research/Education Programs** [G #1, G#3]: For undergrads: 1) MIT Summer Research Program (MSRP), 2) Summer Geometry Initiative, For HS students: MITES (Minority Introduction to Engineering and Science). Faculty act as mentors and/or instructors within these programs. [M] EECS tracks the number of activities that take place, the number and demographics of students reached, the number of faculty participating, the number of participants in these programs who apply to the EECS graduate program, and the number of applicants admitted to the graduate program. Contacts: A. Beyer-Purvis and J. Solomon

**A5: Conference Attendance** [G #1, #3 and #4]: Faculty can accompany and mentor MIT grad and undergrad students attending diversity-focused conferences such as Tapia, SWE, NSBE, and Grace Hopper. Faculty can also oversee EECS conference booths at these conferences, make connections with prospective students, and follow up with contacts made. [M] EECS tracks EECS faculty and students attending conferences, all conference contacts, contacts that attend EECS workshops and information sessions, contacts that apply to EECS's graduate program, contacts that are admitted into the EECS Graduate program/MSRP Summer Program, School of Engineering Post Doc program. Contact: A. Beyer-Purvis

**A6: Offer On-ramp Intro CS Course** [G #5]: Evaluate and improve undergraduate introductory CS courses to ensure that all students, particularly those with no prior CS background and from HUGs, are served. Faculty design curriculum, teach, and evaluate the efficacy of the evaluation and improvement of the class. [M] EECS tracks improvements implemented in intro CS courses, course enrollments and drop rates, and student evaluations. Contact: A. Bell

**A7: SuperUROP Participation** [G#1, G#4]: EECS' Super UROP offers a more structured and sustained approach to MIT's traditional Undergraduate Research Opportunity Program. It reduces the reliance on informal personal networks and offers additional mentoring. Faculty recruit undergraduate students from HUGs for SuperUROP and familiarize themselves with the student-led and -developed guide to best practices for UROP and SuperUROP mentors. [M] EECS tracks number and demographics of students participating in SuperUROP and number of faculty participating Contact - J. Luciano

**A8: Faculty Search** [G#2]: Improve the faculty search process to use best equitable practices such as rubric scoring of applications, search committee training, and pre-interviews. Faculty will learn best practices and be advocates for these processes within faculty search committees. [M] EECS tracks number of faculty participating in best practices info sessions, and the practices implemented by search committees. Contacts - J. Voldman, A. Torralba, and S. Madden.