

**Departmental BPC Plan
Computer Science
Columbia University**

Effective dates of Plan: <entered by CRA officials>

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Context: Over the last decade, The Columbia Computer Science department first saw (2011-2016) a 4x increase in majors and classes, with a significant progress in women representation (from 23%->33% of awarded undergraduate degrees and 24%->36% among masters). In the last five years (2016-2021, more details below) we have been committed to build on those successes to face (1) sustained growth (majors +120% majors, classes +160%) with slower progress in diversity and (2) major events from 2017 and 2020 stressing the urgency for our department to address sexual harassment and systemic racial inequity, as reported in University Climate Survey and elsewhere. Women faculty increased from 18% to 23%, with hires at all seniority levels, one of several faculty offers made to African American faculty candidates was successful, and multiple partnerships were initiated.

G1 Undergraduate: More data early on.

From 2016 to 2021 we maintain a stable fraction of female enrollment (33% degrees awarded compared with 21% national average and 22% in NY state), and saw a modest increase among BHN students (from 23% to 26%) that aligns with national and state increase. Our goal is to progress in two years towards Columbia's BHN students representation (~35%).

A1 (Data, G1) Collect data from students taking CS classes before declaring major (Increase our response rate to the Data Buddy, or receive School Climate Survey singled out by school/dept).

A2 ("What's needed?" survey, G2) By year 2, Identify time and challenges that are specific to women, BHN, student with disability status, non-binary, sexual orientation or other marginalized groups. Meet with local student lead organization (CU Research and Diversity, WiCS) and other partner (AI4ALL alumni) to list possible recommended actions. Conduct a follow-up survey with Data Buddies to receive student feedback. Report to faculty on a yearly basis to identify where extra resource are needed.

G2 Master: Bridging the graduate gap for BHN

Our female Master enrollment does not match undergraduate female graduation but remains close and above national state average. The difference is however much more pronounced for BHN where we underperform the national and state average.

A3 (Admission process) Remove GREs, Identify the attrition rates over the application admission matriculation pipeline.

A4 (Bridge2MS) check with Toni about it

A5 (Recruitment) organize recruiting with faculty participation to address gaps in Tapia, Grace Hopper, AUCC

G3 Ph.D and path to Professorship:

While not specific to Columbia, we observe that diverse students who graduate are less likely to apply to Ph.D Program (20-22% of applicants are female, 9-10% BHN). Access to research and mentoring opportunities are keys to build confidence. We are often but not always able to matriculate a higher fraction of females, we are however not systematically admitting BHN students at those rates (with small numbers to start with). Our goal in the next two years is to outperform our previous 5 years.

A6 (Admission process) include a separate personal statement for Ph.D applicants, organize DEI dedicated events during Ph.D applications and Ph.D visits, waive fees for members of diversity enhancing organization.

A5 (shared with G2 see it there)

A7 (Research for Undergraduates) Orchestrate REU offerings (collect data, create templates for REU request, participate to fair at AI4ALL changemakers, TAPIA conference, Grace Hopper)

A8 (Bridge2Ph.D program) within 2 years, find 2 bridge scholars yearly to create

A9 (Highschool and Undergraduates) Sustain our AI4ALL program creating exposure and leadership roles for diverse students.

G5 Climate and outreach:

G4 Faculty

Recruiting: We need to ensure TOO or Bridge2Faculty program often missed by lack of knowledge of qualified applicant

A10 Retention: Ensure that dept work on DEI is not burdening female and BHN (especially at junior stages) or other marginalized faculty.

A11 Attend rising stars workshop and conferences TAPIA, Grace Hopper, to be ready to contact applicants when TOO and other offers. Have a separate diversity hiring committee on hold outside of the usual cycle to organize those opportunities

A12 Consider (from past applicants) what areas can bring more diverse faculty candidates (e.g., HCI, Sustainable Computing, Equity) and work towards working them in dept priority hiring.

A13 Recruiting process: include a diversity statement in faculty ads, include a slot dedicated to diversity during interview with members of DEI coordination or steering.

A14 Diversity in faculty evaluation

A15 DEI effort recognized as Ph.D service

Repeat as needed.

When you complete this section, you should have met these expectations from BPCnet.org:

- ☐ The Plan identifies the BPC goals the department is focusing on.
- ☐ All goals are specific, measurable, attainable, relevant, and time-bound (SMART).
- ☐ All goals will focus on BPC as defined by NSF CISE (see <https://www.nsf.gov/cise/bpc/>), but may also include additional groups for BPC.

- ❑ All goals have an identifier for reference elsewhere in the document. (e.g., G1, G2)

Consider making a copy of this [spreadsheet](#) ([make a copy](#)) to facilitate collecting a list of existing activities.

When you complete this section, you should have met these expectations from BPCnet.org:

- ❑ Each activity has an identifier for easy reference in a Project BPC Plan (e.g., A1, A2).
- ❑ Each activity identifies which goal(s) it is intended to help achieve using the identifiers set in the goals section (e.g., G1, G2).
- ❑ Each activity includes a clear description of what will occur as part of the activity.
- ❑ Each activity identifies how its outcomes will be measured.
- ❑ Identifies a contact person in the department for each activity.

Notes from Faculty presentation and subsequent meetings

- Black in AI is looking for mentors 2021/2022
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Notes from First Faculty lunch (Dec. 1st)

Notes from Second faculty lunch (Dec. 8th)

- Collect feedback of BPC proposed and funded.
- Seminar and support for TA material intro level course.
- Emerging Scholar Program
- Geared more towards URM and women and TAs 100% women
- Running similar lab (over the summer). Lack of hands-on lab. Possibly expanding (need work from instructors) lab section with upper division. Let TAs have a ladder (2 semesters move up). Develop the contents of the lab. Intro and DS. Slots independent of TA allocation (1pt course). Graduate student. Setting up the ladder (clear path). Java labs (attached to intro course). Pitch it at the beginning: something to do if you are coming into this with no programming background in advance.
- Dept level:
- Justice through Code

