

Departmental BPC Plan
Department of Computer Science and Engineering
University of Notre Dame



Effective dates of Plan: 04/23/24 - 04/23/26

Contact: Tijana Milenkovic, Professor and Director of Diversity, Equity, and Inclusion (DEI), Department of Computer Science and Engineering (CSE) (tmilenko@nd.edu)

1. Context

The University of Notre Dame is a private Catholic university located in Northern Indiana and situated within a racially/socioeconomically diverse region of the state. Notre Dame is partially surrounded by a post-industrial mid-western city of South Bend. Ethnic/racial composition of the student population in the South Bend Community School Corporation is: 0.9% Asian, 37.6% Black/African-American, <0.1% Hawaiian or Pacific Islander, 23.7% Hispanic, 10.3% Multiracial, 0.2% Native American, and 27.2% White (data source: Indiana Department of Education, 2020/2021 school year). The statistics for the Elkhart Community Schools in the nearby Elkhart County are: 1.1% Asian, 15.5% Black/African-American, <0.1% Hawaiian or Pacific Islander, 35.8% Hispanic, 8.1% Multiracial, 0.1% Native American, and 39.3% White (same data source). Ethnic/racial composition for the University of Notre Dame's 2021 student class is: 7.6% Asian, 6.3% African-American, 10.9% Hispanic, 1% Native American, and 67.8% White (source: the University website). The ethnic/racial makeup among undergraduates in the CSE Department at Notre Dame is: 11% Asian, 3% Black or African-American, <1% Native Hawaiian/Other Pacific Islander, 14% Hispanic or LatinX, 5% Two or More Races, 57% White, 8% Nonresident Alien, and 3% Unknown (source: internal tracking). Throughout we use "underrepresented groups" to refer to people who identify as Black or African-American, Native Hawaiian/Other Pacific Islander, Native American, Hispanic or LatinX, and/or women.

Focusing on gender diversity: The CSE Department has 33% female-identified undergraduates. As such, it has made excellent strides toward the University makeup of 49% female-identified students (the local South Bend and Elkhart schools also have 49% female-identified students). The CSE Department's female undergraduate student makeup is higher than the trend of women earning 18–22% (depending on the source) of computer science/engineering bachelor degrees in the U.S.

2. Goals, Activities, and Measurement

G1: The CSE department will support at least 20 students attending BPC-focused community-building conferences each year.

A1: Sending students to community-building conferences [Contact: Profs. Badillo-Urquiola and Kumar]: The CSE Department will sponsor annual trips for our students from underrepresented groups to both the Grace Hopper Conference (~25 students) and Richard Tapia Celebration of Diversity in Computing Conference (~10 students). Broad faculty participation will be encouraged. A faculty member could e.g., help review applications and select participants, or volunteer to chaperone a trip. **Metrics:** Success will be measured by the number of students engaged in these conferences each year (instrument: internal tracking) and by the satisfaction of students participating in the conferences (instrument: survey).

G2: The number of students from underrepresented groups engaging in CSE research will increase each year.

A2: Promote undergraduate research [Contact: Prof. Cleland-Huang]: Undergraduate research opportunities may help retain students and encourage them to pursue graduate education. We will match our students from underrepresented groups with research opportunities at Notre Dame during the academic year or summer (including through our confidence-building summer enrichment program for rising sophomores), as well as recruit students from underrepresented groups from other schools to our CSE summer research opportunities. **Metrics:** Success will be determined by the number of our students from underrepresented groups placed in research positions each year (instrument: internal tracking, student and Data Buddies surveys - see A5 below), and the number of students from these groups attending or with an intent to attend graduate school (instrument: exit survey & follow-up tracking).

G3: 50% of CSE faculty will engage in DEI training/education each year.

A3: Faculty professional development [Contact: Prof. Milenkovic]: CSE faculty will engage in DEI training/education efforts each year to improve their knowledge around issues, pedagogies, etc. that directly impact students, staff, and faculty from underrepresented groups. Examples include participation in inclusive teaching workshops (including implementation of relevant inclusive teaching practices in the classroom), implicit bias training, or anti-racism education. **Metrics:** Success will be measured by the percentage of the CSE faculty participating in DEI training/educational opportunities each year.

G4: Engage in at least two computing-oriented activities for K-12 teachers and/or students each year, recruiting participants from schools with high numbers of students from underrepresented groups.

A4: Outreach and engagement with K-12 [Contact: Prof. Niemeier]: CSE faculty will lead activities that engage teachers, counselors, or students from underrepresented groups in the local schools. For example, through Research Experiences for Teachers (RET) efforts, faculty will provide an opportunity for a K-12 teacher/counselor from the South Bend/Elkhart schools to participate in an immersive research experience during the summer. Faculty can also participate in K-12 computational thinking and coding programs, such as engaging with local high school students through the South Bend Code School after-school program, or with local middle school girls through the Expanding Your Horizons conference offered annually on our campus, all aimed at encouraging participation in computing. **Metrics:** Success will be measured by the number and student demographics of K-12 schools in which the CSE Department has a regular presence (instrument: internal tracking), number of teachers/counselors from local schools participating in training efforts (instrument: faculty reporting), number of local K-12 students interested in studying CSE in college (instrument: survey), and satisfaction of students participating in the programs (instrument: survey).

G5: Annually assess department climate and inclusivity.

A5: Data Buddies and climate/culture survey [Contact: Prof. Milenkovic]: The CSE Department will continue to participate annually in the Data Buddies survey conducted by CRA. The CSE DEI Committee will utilize this data, potentially combined with follow-up focus group discussions, to identify a concrete BPC area of improvement each year for implementation by the following year, which individual faculty will be able to contribute towards. Further, we will contribute to BPC-focused analyses of a periodic culture/climate survey conducted by our College of Engineering. **Metrics:** Success will be measured by our improved understanding of current challenges in our undergraduate and graduate programs based on the survey results, by the number of mitigations put in place to address them, and by comparing survey results from one survey offering to the next to evaluate the level of potential improvement.