

## Commitment to Diversity and Inclusion

Students, faculty and staff in the Center for Biomedical Engineering (CBME) have identified a commitment to diversity as a core value of our organization. Towards that end, we have developed this Diversity & Inclusion Action Plan (DIAP) to practice our collective interest in fostering a diverse and inclusive community of biomedical researchers. This work had its origins in conversations between students in the Biomedical Engineering & Biotechnology graduate programs. Their experience with other DIAPs across Brown University suggested that CBME could benefit from such a structure, tailored to the unique circumstances of this cross-divisional center.

The document that follows describes a metrics-driven list of actions and outcomes that make tangible our commitment to diversity, inclusion, and equity. By following through on these actions, we will create a more diverse and inclusive environment that supports the professional and personal development of our students, fellows, staff, and faculty. We will hold ourselves and all of CBME accountable for this plan which will revisit frequently to help us measure our progress. Although this document provides a strong starting place to begin this process, the DIAP should be revised annually based on an assessment of its effectiveness and the current needs and climate of the University and of society at large.

We propose that a small group of engaged faculty, students and staff meet 1-2 times a semester as needed to steward this DIAP. This DIAP group will have two responsibilities. First, to engage all members of CBME with issues of diversity and inclusion, starting with communications about the CBME plans in this area. Second, to direct the energy of the CBME community towards the actions proposed in the plan and report back to the DIAP group on their progress. Every year at the CBME Spring Retreat this group will formally detail what actions CBME has taken, and update this living document based on the broad community sentiment.

## Diversity & Inclusion Action Plan Inaugural Committee Fall 2019

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## History & Motivation

Brown University is one of the elite universities of the United States and a member of the prestigious Ivy League. Its history reflects that of its country with regards to its inclusion of women and under-represented minorities in its activities. Brown's relationship to slavery goes back to its very origins as documented by a University task force on slavery and the institution, commissioned by then President Ruth J. Simmons. This influential and sobering report reminds us of this terrible time in our national history and our institution's role in both benefitting from and perpetuating slavery.<sup>5</sup> Brown University was first desegregated in the 1870s with Inman Page, who was born a slave; later, in 1877, George Washington Milford was recorded as the first black student to graduate from Brown.<sup>1</sup> In 1905, Ethel Tremaine Robinson, was the first black woman to graduate from Pembroke College, Brown's women's college.<sup>2</sup> Simply admitting students into its programs did not address the many systemic issues faced by African Americans on campus. On December 5, 1968, 65 out of 85 African American women and men, enrolled at Pembroke and Brown respectively, initiated a walkout to demand an increase in the admission and support of African American students from 2% to 11%, the national composition in the United States at the time.<sup>3</sup> It wasn't until July 1, 1971, that Brown University allowed female students to enroll; at that time it merged officially with Pembroke College and "the offices of the two colleges for admission, financial aid, placement, housing, and counseling in the final act of making Brown a truly coeducational university."<sup>4</sup>

As of 2014, only 8% of Brown faculty were from underrepresented backgrounds with even lower fractions at the full professor level and in STEM.<sup>6,9</sup> In May 2016, the first black woman on record graduated with a bachelor's of science in Physics from Brown University.<sup>8</sup> On February 1, 2016 Brown University published its guidance on improving diversity on its campus. "Pathways to Diversity and Inclusion Action Plan (DIAP), which outlines a set of concrete, achievable actions to make Brown a more fully diverse and inclusive community... and acknowledges that institutions of higher education, including Brown, have traditionally failed to fully include people of all races, ethnicities, creeds, socioeconomic classes, gender identities, sexual orientations,

and disability statuses,” and has a responsibility, “[t]o confront this reality and its enduring legacies.”<sup>7</sup>

This institutional context lays the foundation for our center’s commitment to engaging in activities that promote diversity and inclusion. Higher education, and biomedical research, have an extensive legacy of exclusion and exploitation of minoritized groups. This history continues to have lasting impact on the diversity of biomedical engineering professionals, and perpetuates inequitable access to biomedical innovation and research. We must confront and overcome this legacy by actively working to create an environment that sustains pathways for recruitment and professional development of individuals from underrepresented groups.

Nurturing and developing a more diverse culture also improves our scholarship. Biomedical Engineering straddles many disciplines and requires the synthesis of disparate fields of knowledge; our teams must be assembled from diverse populations and backgrounds so we can approach the grand challenges of our field with unique and creative perspectives. We believe that race and ethnicity should be central to diversity and inclusion initiatives given the history of the United States of America and Brown University’s own legacy of slavery and exclusion. We also believe that diversity and inclusion initiatives should be inclusive to all minoritized identities, or individuals from groups who may be underrepresented or have less power due to some facet of their identity. This includes but is not limited to gender identity, sex, sexuality, class, nationality, religion, immigration status, disability, age, and veteran status.

Finally, we believe that the development of diversity and inclusion initiatives will benefit the entire community by cultivating a welcoming environment that values personal and professional development and fosters collaborative team-based science that encourages individuals to bring their full identity to the workplace, free from harassment or discrimination.

Actions for the CBME DIAP

In order to have a more diverse and inclusive environment, CBME must engage in three different types of activities:

- **Assessment.** Characterizing progress on improving diversity and inclusion within any organization is challenging. How do people experience our CBME climate? Do our members find the program is diverse and inclusive? Are we attracting a diverse set of individuals into CBME?
- **Development.** These internally focused activities seek to build knowledge and capacities for our researchers, staff and organization. Can we provide resources that help everyone become more educated about issues related to diversity and inclusion? What strategies are the most effective at changing behavior related to bias? How can we benefit from partnerships with others on campus to improve our climate for diverse individuals?
- **Outreach.** We should project, outside of Brown University, our center’s commitment to diversity and inclusion. By doing so we hope to attract even more diverse individuals to our center, and contribute to the national conversation about diversity in STEM.

These categories encompass a number of concrete goals and actionable items prioritized on a timeline ranging from 1-10 years in order to best identify short vs. long term goals and ensure ongoing progress in developing a more diverse and inclusive environment within and surrounding CBME. Each goal has a quantitative metric to determine success. Commitment to this action plan will be assessed with yearly evaluations administered by the incumbent DIAP committee. A checklist detailing which goals were achieved, are in progress, or were not achieved will be developed, and further actions will be determined following this

evaluation based on progress. This will be released to the CBME electronically and presented to the community the yearly Spring Retreat to collect feedback.

## Actions

Category	Goal	Actions		
		Short Term (1-3 years)	Medium Term (3-5 years)	Long Term (5-10 years)
<i>Survey, Assessment, &amp; Communication</i>	Annual Climate Survey: survey cBME to assess program climate and make informed, data-driven decisions	Develop and deploy yearly survey; integrate longitudinal data; integrate with doctoral, masters, and climate surveys	Assess current response rates; increase response rate by 5-10% per year; analyze data; generate action items & initiatives from data	Show longitudinal improvement in undergraduate, masters, doctoral, staff, and faculty climate and write a report documenting best practices
	Town Hall: hold semesterly town halls to facilitate student / faculty / staff input and feedback	Carry out fall town hall and spring retreat; document what is or is not effective; make changes based on feedback and town hall results	Increase attendance by faculty and students. Evaluate the efficacy of this input and feedback strategy. Iterate on format.	Sustain an effective student / faculty / staff input and feedback platform with respectful bidirectional relationships.
	Compositional Data: compare cBME demographic data with internal, external, national data	Compile national statistics and statistics for peer institutes, produce visualizations, integrate with our internal data longitudinally	Track progress; analyze recruitment strategy efficacy versus demographic changes; track attrition and alumni success	Improve compositional diversity to close the gap between national and cBME composition; Defines metrics for inclusion
	Best practices: survey best practices related to D&I in STEM	Compile primary literature related to D&I in STEM; Invite speakers researching D&I in STEM; develop resource website	Distribute key resources and/or hold workshops for faculty, staff, graduate students, and TAs	Publish our own best practices paper on successful activities
<i>Education &amp; Development</i>	Resource Awareness & Partnerships	Develop relationships with on campus	Check in at least once per year with each of these	Establish co-sponsored programming with

		<p>resource offices; compile internal and external resource list. - Sheridan Center - Brown Center for Students of Color (BCSC) -LGBTQ Center -CareerLab -UFLI Center - Science Center - CAPS -Swearer Center -Sarah Doyle Center for Women and Gender -Global Brown Center - Pembroke Center -Center for the Study of Race &amp; Ethnicity</p> <p>Host seminar / lunches / discussions on topics intersecting identity, STEM, higher education</p>	<p>organizations; hold at least two open discussions about these resources.</p> <p>Establish a website page for Diversity &amp; Inclusion</p> <p>Increase student discussion on Diversity &amp; Inclusion (e.g. at BME seminar)</p>	<p>at least 50% of these organizations; re-assess if campus resources have changed and if there are new centers or resources to develop partnerships with</p>
	Mental Health: Promote mental health and wellbeing	Work with CAPS; Health Services; SHARE Advocates to make mental health resources readily accessible	Establish faculty/staff training workshops in recognizing and supporting students with mental health issues	Train > 50% of faculty, staff, and students in mental health support. Expand and iterate upon successful workshops
	Mentorship: Develop training modules for mentorship, D&I, inclusive classroom	Identify local (i.e. Advance-CTR) and national mentoring resources (Univ. of Wisconsin)	Professional mentorship training for faculty and rewards/recognition for completing the training	Provide training for >75% of mentors and mentees affiliated with CBME
<i>Recruitment &amp; Outreach</i>	Build pipeline of students to apply for graduate programs	Apply for Training Grant to support students outside of Brown and	Re-apply for training grants; Recruit to effectively utilize	Increase applications, matriculation, and graduation of

		research programs and Institutions serving URM students	funded grants; Establish relationships with URM and low-income schools	HUG, first-generation, and other under-represented populations
	Increase attendance at identity based conferences	Allocate funding for students interested in recruiting and professional development; survey students attending identity conferences. Take an active role in diversity preview day and institutionalize procedures for future preview days.	Brainstorm and analyze recruitment efficacy; Pivot recruitment strategy if necessary; Continue to fund student PD	Brown BME represented at and recruiting from >3 identity conference per year
	Support identity groups at Brown	Identify groups in which cBME students are active; establish budget to provide yearly financial support; encourage cBME student participation in identity groups through advertisement of meetings, co-hosting and funding events , collaborate in programming -SACNAS -oSTEM -GSOcNSTEM -GWiSE	Institutionalize yearly check-ins with identify-based organizations each year; Co-sponsor activities and programs; Institutionalize funding for groups	Consistent support across groups

## References

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