The Biomedical Engineering Diversity, Equity & Inclusion Plan

Our department is committed to creating and sustaining a community that values diversity and champions equity and inclusion.

With the word *Diversity*, we mean all of the values and experiences that come from a multitude of cultures and experiences, including, but not restricted to, differences in race, ethnicity, age, gender and gender identity, language, religion, sexual orientation, ability or disability, and socioeconomic status.

By *Equity*, we are referring to the unbiased treatment of all individuals, and the promise of fair and equal access to all opportunities and resources, removing any barriers that may exist for marginalized groups.

*Inclusion* to us means welcoming, respecting and supporting all views and opinions, and ensuring that all individuals feel they belong.

In order to reach our DEI expectations, we are developing a long-term plan that addresses the many aspects and different groups within our department. We readily acknowledge that there is no single remedy and no “quick fix” we can apply, but we expect this to be an ongoing effort that will adapt and change as our department grows and matures. The categories below contain the initial details within the plan that we will implement with ongoing analysis and revisions.

**STUDENTS**

Students are a key constituency in our department and the university. As a public university in the state of Michigan, we have a duty to serve and represent the people of our state. However, as a leading university, both nationally and internationally, we also benefit from attracting a diverse student body from all US states, and many cultures and countries around the world. We have highly ranked undergraduate and graduate programs that can be leveraged to provide opportunities for underrepresented and minoritized students (URMs). Listed below are some ideas for improving the environment and culture for our students (and future alumni).

**Undergraduate Students**

- Recruit and support undergraduate researchers. We consider research experience an essential factor for graduate school admission. We need to ensure that all our students have that opportunity so that they can move up to the next level.
- Ensure that the student groups we support also value DEI.
- Support career fairs and similar events and eliminate barriers to any student.
- Help our own students in their applications for medical, graduate or professional schools.
- Establish a stronger support network for our UG students, namely something that goes beyond the course advising they get.
Graduate Students

- Continue our move towards a more holistic review of graduate applications. Among other things, we should consider following the Medical School (and other institutions) in eliminating the GRE from our applications. The GRE has no value in predicting student performance and is actually biased against URM students.
- Attract grad applications from URM students through programs like EMERGE and recruiting at conferences like BMES, NSBE, SHPE, SACNAS and ABRCMS.
- Work with the PREP and Bridge to the Doctorate programs to bring URM students into our program.
- Broaden the engagement of MS student in planning of activities, particularly since this may be a second path to bringing diverse PhD students into our department.
- Ensure and equitable interview process during recruiting, and that prospective students know beforehand the format and expectations.

TEACHING

Instruction at both the undergraduate and graduate levels is central to our mission. As an engineering discipline, our curricula are highly quantitative and analytical, and we do not face many challenges in making our course content accessible and inclusive. However, the manner in which we teach and the way that we interact with students are still important in creating an inclusive classroom.

- Continue offering the inclusive teaching seminars from CRLT.
- Respect students’ preferred pronouns and be more general in pronoun usage (they/them).
- Citing examples in class from a diverse range of scientists
- Offer help to students that are struggling. We need ensure that students recognize the benefit and use of attending office hours, and know of resources available to them
- Invite a diverse array of internal and external speakers for seminar classes (e.g. BME 500).
- Address microaggressions from faculty, students, or other class participants
- Should we create a means for students to submit (anonymous) feedback? Create an ombuds position or something similar?

STAFF

The staff of the BME department, and arguably any department, are vital for day-to-day operations and essential for success. They play myriad roles, and they directly interact with students, other staff, faculty, and outside stakeholders. As such, they need to reflect the same diversity as these other groups, and they must create and maintain an environment that is inclusive and equitable.

- Diversity is an ongoing goal for our staff, and remains a top priority
- Participate in DEI training, workshops, etc., and ensure these opportunities are available for everyone
- Inclusion of all voices in departmental operations
- Respectful communication of students and faculty within and among the staff

FACULTY

The faculty of the department does the teaching, recruits the students, mentors the lab work, votes on hiring, etc. and thus has a greater responsibility for supporting DEI. We have made significant strides in the past decade diversifying our faculty, most notably with respect to gender, but we still have some
ways to go. Since faculty turnover is relatively slow (halftime of ~ 10 years), we need to be active to achieve change.

- Proactive faculty search to identify specific groups we want to attract. We already advertise with NSBE, SWE, SHPE, etc., yet we can search for other opportunities.
- Invite early-career postdocs or even senior graduate students to practice interviews. This experience will be very valuable for them and will help us establish connections.
- Ensure an equitable interview process, and that candidates know beforehand exactly what the format and expectations are.
- Broaden the standards used in evaluating candidates. We tend to focus primarily on past research, publications and future research plans, yet the standards should be rebalanced to place more weight on the candidate’s skills as a mentor, teacher, etc.
- Maintain a structured and fair discussion of candidates, and that each candidate is judged by the same criteria.
- Participate in DEI training, workshops, etc., and ensure these opportunities are available.
- Respectful communication with students, staff, and faculty. Learn to recognize microaggressions and to respond by addressing the comments without being aggressive or defensive.

**DEPARTMENTAL CULTURE & CLIMATE**

Apart from the specific actions listed above, we can make improvements to the overall climate within the department. The department’s “Culture Crew” is a department-wide DEI committee with representatives from the underlying groups. This group will continue its work to improve the department, but here are some ideas.

- Work towards diversity at all levels. If we only produce diversity in one group (e.g. graduate students), this does not make the overall department diverse.
- Create a safe environment where everyone, including those from marginalized groups, feels free to offer opinions and contribute ideas.
- Offer more training and workshops on DEI issues, including topics such as micro-aggressions, implicit bias, etc.
- Acknowledge that we will make mistakes as we go through the process and each of us need to be open to being corrected.
- Plan BME recognitions and celebrations for dates such as Juneteenth, MLK day, and other key days of focus for various groups and stakeholders.