College of Engineering

Diversity, Equity and Inclusion Strategic Plan

Five-Year Strategic Objectives, Measures and FY20 (Year 4) Actions

July 10, 2019
To: Office of the Provost – Diversity, Equity & Inclusion

This submits our updated five-year DEI strategic plan for the College of Engineering.

Our DEI plan at the College of Engineering (CoE) remains fundamentally the same, with no changes to our strategic objectives. During the past year, we have dramatically ramped up our engagement activities, leveraging the University climate surveys, our departmental DEI leads and advisory councils (students, staff, and external stakeholder groups) and launching a DEI lecture series. Appointment of a new faculty director (Sara Pozzi) for DEI activities has brought more capacity and focus on driving forward our strategic initiatives. Additionally, we formalized a DEI communication plan; key initiatives included an updated diversity website, an active DEI blog and proactive marketing of DEI events. During the year, we sponsored several events aimed at demonstrating our commitment to understand and improve our climate while celebrating our cultural diversity and the creativity it brings. We launched a new COE DEI Lecture Series bringing experts to give lectures to our faculty, students, and staff. We have continued to invest in formal training for College members, including bystander intervention training and cultural intelligence training for faculty and staff. We now have certified trainers in the College for both workshops.

New to our plan this year is the designation of four focus areas that we want to emphasize:

- Climate – responding to climate surveys; sexual harassment and misconduct prevention
- Metrics – developing ways to evaluate programs/initiatives and evaluating the entire COE and Department-level DEI program
- Inclusive teaching – reaching more instructors (faculty, graduate student instructors and undergraduate instructional aides; assessing increased awareness and adoption of inclusive teaching principles and practices
- Faculty recruiting and hiring

While these fall within our strategic objectives, there is an urgency to make specific progress against these in the coming year. Each focus area has been assigned to a member of our Implementation Committee and activities/progress will be reviewed in each Committee meeting.

With the continued support of Dean Gallimore and the administration of the College, we expect to continue to provide leadership in this important area.

Sara Pozzi
Professor, NERS / Director, DEI
CoE DEI Implementation Lead

Robert Scott
Director, CEDO
CoE DEI Implementation Lead
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**Implementation Highlights**

The third year of implementation of the College’s DEI strategic plan moved the College to a new level of activity and engagement. The College has reinforced its commitment to a mission and vision that strives to anticipate the global, technological and educational changes ahead, and position our institution to lead the evolution of 21st-century engineering research and education for the benefit of the common good. The College is focused on three pillars of excellence – research, education and culture – pushing ourselves to be innovative, daring and forward-thinking in our service to society. Providing the foundation for these pillars will be our core values, and the people and spaces that enable our work. Creating an innovative and inclusive community is at the core of our mission. Our five-year strategic plan in Diversity, Equity and Inclusion (DEI) is a priority as we strive for excellence, led by an implementation committee charged to oversee the DEI strategy and specific supporting initiatives and projects.

A critical element of our Year 3 plan was to increase engagement with the DEI strategy by students, faculty, staff and external stakeholders. During Year 3, we leveraged College DEI advisory councils to build strategy awareness and to get feedback on plans/activities. We focused on the faculty and student climate surveys as a platform for engagement. The Student Advisory Board (SAB), made up of graduate and undergraduate students, took the lead in driving discussions of the student climate survey results. The SAB leveraged their “ENGIN Talks” series as a forum to discuss climate survey results. Similar discussions were held with faculty regarding the faculty climate survey. These discussions were led by the Dean and the DEI Director and highlighted important gender-related issues that require further examination and action. We performed follow-up information gathering via focus groups and one-on-one interviews with approximately 70 CoE faculty members.

An external DEI advisory council continued to meet regularly with the Dean and senior College administration with the purpose of providing external advice on the College efforts to implement the strategic diversity plan and other matters related to creating and maintaining a diverse and inclusive climate for faculty, staff, and students. Members include senior corporate leaders, national student board leaders, educators, and alumni.

We followed up Year 2 DEI training for staff with the formation and active leadership of a staff DEI committee. This committee meets on a regular basis and oversees initiatives to encourage staff engagement and address staff issues and opportunities. For example, a team was formed to identify ongoing professional development opportunities for staff members. Another key initiative was the formation of a project to encourage staff participation in the College creativity/innovation/daring cultural initiative. Finally, the staff DEI committee has provided regular DEI-related blog entries for the College DEI website.
During the year, we formalized the program of DEI leads within departments to highlight and review department DEI activities by establishing monthly lunch meetings. This enabled the sharing and reapplication of good ideas. The College also recruited and hired two lecturers with DEI expertise and experience. This was an action item from Year 2 that was put in place as we began Year 3. One lecturer is focused on inclusive teaching, including gathering best practices and DEI-related curriculum, and disseminating these practices and curriculum to instructors across the college. The other lecturer has focused on developing and coordinating DEI-related metrics related to faculty, staff, and students, covering all areas of the DEI strategic plan.

During Year 3 we continued to run an expanded cohort for the M-ENGIN Academy, despite no longer having DEI funding provided by the Provost’s office. We also continued our experiential learning fund which enabled us to again support an M-ENGIN alternative summer trip to Florence (Italy) as well as providing funding for student professional development, and several multidisciplinary program projects.

We continued to produce innovative engagement events, designed to redefine the concepts of diversity into positive interactions that build the climate. Examples include:

- “impactXchange” – a nonpartisan event to encourage civic engagement and voting, sponsored by the four North Campus schools as a collaboration.
- Creativity/Innovation/Daring workshop – event held to encourage Michigan Engineering staff to kickoff a program to encourage engagement by staff.
- The new DEI Lecture Series – featuring speakers on data privacy (James Felton Keith) and diversity driving creativity/innovation (Scott Page)

Another key initiative during Year 3 was the development of a strategic DEI communication plan. A special committee led by CoE Communications & Marketing created and began execution of a plan to raise awareness and visibility among all College of Engineering students, faculty and staff around the DEI strategic plan goals and progress, and tools or resources available to the CoE community. Specific actions include a) driving heightened awareness of DEI initiatives and projects leveraging the College DEI website, email and other digital marketing tools, b) increasing engagement through proactive marketing. The communication plan was key in promoting College DEI events.

**Implementation Leads:** Sara Pozzi, Professor, Nuclear Engineering and Radiological Sciences and Director of Diversity, Equity, and Inclusion; and Robert Scott, Director, Center for Engineering Diversity and Outreach (CEDO).

**Planning Team/Structure:** The purpose of the CoE DEI Implementation Committee is to plan and oversee the implementation of programs and activities of the strategic plan. The committee comprises senior leaders responsible for all areas of CoE operations. Current members are Michael Wellman (Academic Affairs), Joanna Millunchick (Undergraduate Education), Mary-Ann
Sara Pozzi was appointed Director, Diversity, Equity & Inclusion at the beginning of Year 3 and has served as the chair of the Implementation Committee. She has brought both capacity and passion to the effort; as a faculty member, she has personally increased College administration and faculty understanding and ownership for DEI efforts.

RoseMarie Moya continues to serve as formal project manager for the implementation committee. Key responsibilities of the project manager are:

- Coordinate resources for the flawless execution of projects
- Ensure that all projects are delivered on-time, within scope and budget
- Developing project scopes and objectives, involving all relevant stakeholders
- Ensure resource availability and allocation
- Develop a detailed project plan to track progress
- Measure project performance using appropriate systems, tools and techniques
- Report and escalate to management as needed
- Create and maintain comprehensive project documentation

**Implementation Committee Charge:** The Dean’s charge directed the Committee to:

- Engage the CoE community, especially students, in evaluating and further shaping the plan.
- Review, refine and prioritize the initiatives and projects defined in the DEI Strategic Plan.
- Provide project oversight and management for DEI initiatives and projects. Ensure that roles and accountabilities for implementation are defined. Provide recommendations to senior administrative leaderships (Dean, Cabinet, Executive Committee) for actions, rewards/recognitions and interventions (if needed).
- Lead necessary marketing and communication efforts to ensure broad understanding and engagement with key constituency groups both inside and outside the College
- Establish the initial set of DEI measures, ensure that these metrics are collected and reviewed on a regular basis.

**Planning Process:** During Year 1, the Implementation Committee developed a prioritized action plan using formal project management methodology. This action plan continues to be the basis for regular implementation progress reviews. The Implementation Committee meets biweekly to refine and update the action plan and to review progress at both the College and
department levels. The Committee also proactively manages a College communication plan, including a DEI website, blog and other social media platforms.

Through the work of the Committee, progress was made on several key initiatives, including building awareness for DEI concepts through the sponsorship of engagement forums and workshops, improved diversity recruiting for students and faculty and strengthening DEI engagement at the department level.

With the formal creation of a team of departmental DEI Leads, we can share best practices, deploy DEI initiatives more consistently across the College and provide robust communication to departments.
II. Year 4 Focus Areas

We will continue to manage our DEI strategy addressing the full set of eight strategic objectives defined in our original DEI strategic plan. These objectives focus on creating and building DEI capability and capacity which we see as essential to creating an innovative and inclusive community. This is at the core of our mission, and our complete five-year strategic plan in Diversity, Equity and Inclusion (DEI) is a priority as we strive for excellence.

Based on our progress and experience to date, we have prioritized a subset of our DEI strategic plan as focus areas for the coming year. Our plan is to aggressively manage initiatives in these four focus areas to ensure that we achieve “breakthrough” progress in the next twelve months:

A. Focus Area – Climate

In Year 4, we will focus on improving our workspace climate for faculty, students, and staff in the College of Engineering (CoE). We will continue to raise awareness of climate issues that disproportionately affect underrepresented students, faculty, and staff. We will continue our CoE DEI lecture series that has been a successful initiative we begun in Year 3. In particular, we will educate our community on sexual harassment and misconduct prevention in an effort to promote a safe and supportive environment for all members to work, learn, and thrive. We will accomplish this by hosting a COE DEI lecture and workshop on this topic on Nov 12 and supporting unit-level participation in mandatory university training.

We will increase transparency in CoE. In Year 3, we had UM Advance staff perform a salary equity study for all faculty in COE. We will complete the analysis of raw data of the salary study, draw conclusions, and will distribute the results to college leadership, department chairs, and faculty at large. We will make any necessary adjustments to the way salary is determined for CoE faculty.

As a response to Year 3 faculty climate results, our plan of action included further information gathering. We hired an external facilitator to conduct focus groups and one-on-one interviews with about 70 faculty members in CoE. We will analyze the results of these activities, find common themes, and develop a plan to address areas of concern. For example, we will offer three sessions of the Change it Up bystander intervention training for faculty (only), staff (only), and combined faculty and staff in the Fall of 2019.

As a response to Year 3 student climate results, we plan to conduct focus groups with both undergraduate and graduate students. These groups will be facilitated by our DEI lecturer and
staff members in the graduate program office. The objective of these focus groups will be to gather more information from students to develop a plan of action for addressing areas of concern.

Finally, we will take the lead in addressing the issue of sexual harassment and misconduct. The College proactively advocated to have the University join the Sexual Harassment Collaborative (a National Academies initiative) as a founding member. The Dean and the DEI Director have made participation in the sexual harassment training a priority for all. Plans are underway to have one of the Year 4 sessions of the DEI lecture series focus on the topic of sexual harassment.

B. Focus Area – Metrics

During Year 3, a College of Engineering DEI lecturer was assigned to investigate and analyze assessable, quantifiable DEI-related metrics. An in-depth comparative and statistical analysis was done on a wide range of survey data from the undergraduate student population – such as the CoE Climate Survey and the UMAY survey – which has allowed for us to quantify the current state of the DEI climate and progress made in recent years. This analysis elucidated a quantitative view of what the College's DEI climate is in general for undergraduate students; next, in Year 4, focuses will shift to collecting and analyzing qualitative data to determine reasons why the current climate is what it is. Quantitative analysis demonstrated that perception of DEI climate and DEI-related issues varies widely based on student demographic and department; therefore, next steps will focus on collecting data specifically within these smaller sub-communities to allow for a more focused, nuanced view of the DEI climate in the College. Focus groups will be held (separately) with undergraduate and graduate students, to investigate why the climate is perceived the way it is, and furthermore, to determine why it varies based on student demographics or student major. Results of these focus groups will illuminate more specific ways to maintain or improve the climate moving forward, and to move toward each student having a positive experience in the College regardless of their identity or major.

Faculty focus groups will be convened to better understand the climate issues faced by faculty members with attention to be paid to understanding gender-based issues that surfaced in the College Survey. Plans also include enhancing metrics for faculty hiring, promotion, tenure in various faculty categories, by demographic group and other diversity indicators.

The Staff DEI Committee will leverage the Business and Finance staff satisfaction survey that will also include DEI questions. This will provide additional metrics on staff climate.

C. Focus Area – Inclusive Teaching
In Year 4, we will continue our focus on inclusive teaching professional development in the College of Engineering with the goal of reaching more instructors and assessing the increased awareness and adoption of inclusive teaching principles and practices for participants in select inclusive teaching programs. We will collaborate with CRLT-Engin to provide a range of inclusive teaching professional development opportunities. CRLT-Engin will continue to offer a dedicated inclusive teaching workshop for all new faculty, GSIs, and undergraduate instructional aides during orientations; college-wide workshops as a part of the CRLT-Engin Seminar Series; and customized workshops on inclusive teaching for department meetings and retreats. For deeper engagement with inclusive teaching practices, CRLT-Engin will continue facilitating a faculty learning community on inclusive teaching that introduces participants to theories, frameworks, and practices to support inclusive teaching in engineering. New this year, an inclusive teaching course design session will be piloted.

To expand the range of resources and examples of STEM-specific teaching practices, a new STEM inclusive teaching website will launch housed on the CRLT-Engin website that is structured around these inclusive principles: fostering a sense of belonging, communicating norms and expectations clearly, structuring interactions between students, and articulating the value of diversity in the learning environment. These resources will be expanded in year 4 through a summary of CoE faculty inclusive teaching practices based upon a series of interviews conducted by one of the CoE DEI lecturers. A dissemination plan will be developed and implemented to increase faculty awareness of these resources.

As a synergistic effort with the Year 4 “metrics” focus area, the inclusive teaching initiatives in the CoE will continue to determine the reach of inclusive teaching programs by counting program participants in aggregate. As a new endeavor, in select inclusive teaching programs, CoE will partner with assessment experts from CRLT as well as one of the CoE DEI lecturers, to examine program participants’ increase in knowledge/skills and change in teaching practices.

D. Focus Area – Faculty Recruiting/Hiring

The Year 4 focus on faculty diversity will intensify our efforts to enhance the diversity of our tenure-track faculty. We will maintain our existing practices designed for this end (e.g., mandatory STRIDE training for faculty search committees, target-of-opportunity slot accounting), and in addition undertake the following:

1. Conduct “Hiring our Values” discussions with each of the departmental faculty search committees (~13 anticipated). In these meetings, the DEI Director and ADAA discuss with search committee members the challenges and opportunities for hiring diverse faculty and
share best practices. The discussions aim to provide constructive guidance in the context of each department’s situation and search process.

2. Modification of open-rank search practices. Review of historical CoE hiring data revealed that the proportion of women and under-represented minorities have been over twice as high for junior (assistant) compared to senior (associate and full) hires. We plan to implement new search guidelines that will increase the proportion of our hiring at the junior level with anticipated diversity benefits.

3. Extend offering of non-evaluative meetings at interviews. Faculty candidates may have concerns about climate or other issues that they would prefer to raise in a non-evaluative setting. We plan to arrange non-evaluative meetings for all tenure-track faculty candidates, with faculty representatives of various theme groups to be selected by the candidate.

4. Improve leverage of NextProf programs. CoE’s NextProf (now conducted in partnership with UC Berkeley and Georgia Tech) has been quite successful in helping prepare a broadly diverse group of PhD students and postdocs prepare for the job market. We have hired a couple of NextProf alumni to date and aim to bolster this record with more systematic tracking of prospect connections with our search processes.
III. Strategic Objectives: Year 4 Update

Our first three objectives could be termed “foundational”, as they are necessary to create the processes, tools, structures and capabilities to effectively deliver on our vision and strategy for diversity, equity and inclusion.

1. *Increase the understanding and application of diversity, equity, and inclusion concepts to build skills and provide learning experiences to effectively and constructively engage in dialogue on DEI-related topics across our community.*

Year 4 Update:
Plans are to continue DEI training for students, faculty and staff. During the past year, we trained two trainers for the “Change It Up” bystander intervention training; plans are to offer three sessions to CoE faculty and staff in the fall. We also certified a trainer for Cultural Intelligence/Cultural Values training which will be offered to graduate education chairs and graduate education staff. Orientation and Pre-Orientation for masters and doctoral students will include DEI educational components. Efforts will also continue to review the undergraduate curriculum, modifying existing courses and creating new curriculum to replicate best practices identified through our Inclusive Teaching initiative.

2. *Build a robust and complete set of metrics with an established standardized methodology for the continuous collection and monitoring of information (data) relevant to the reporting and evaluation of DEI-related issues within the College of Engineering.*

Year 4 Update:
As noted, metrics will be a prime focus area for the coming year. The faculty and student climate surveys provided baseline data and highlighted the need for deeper examination of climate-related elements. The Faculty Senate has added new standard questions to course evaluations. Some of these questions speak to climate and could be useful to track.

3. *Build mechanisms, including leadership accountability and reward systems, to bring a “constancy of purpose” in focusing on DEI-related issues and opportunities within the college.*

Year 4 Update:
A key development during the past year was the appointment of a faculty DEI director to oversee the DEI effort. This, coupled with the formalization of the department DEI Leads, has brought capacity and passion to the DEI efforts of the College. We plan to strongly encourage the DEI department leads to align with the focus areas incorporating the areas into the local action plans of the departments.

During the coming year, we will continue to leverage the advisory councils formed to build strategy awareness and to get feedback on plans/activities. The Student Advisory Board (SAB) is made up of both graduate and undergraduate students and has become a strong voice for input and action. The Dean's External DEI advisory council (consisting of senior corporate leaders, national student board leaders, educators and alumni) has been very proactive in engaging College leadership on actions to improve implementation of the strategic diversity plan and other matters related to creating and maintaining a diverse and inclusive climate for faculty, staff, and students.

The next five objectives are essential to creating our future state. They leverage the foundational objectives to deliver key outcomes.

4. **Build communities and creative learning spaces by leveraging and transforming the use of space within the College to create an inclusive environment that welcomes and supports students, postdoctoral fellows, instructional and research faculty, and staff.**

   **Year 4 Update:**
   - Space is a valuable resource, and the way we choose to use that space reflects our priorities and commitments. Space has a tremendous impact on the learning environment within the College. Effective use of space can create natural learning communities that invite intercultural engagement and/or provide “safe havens” for groups to come together and feel included and supported. There are several new building projects underway that can have a positive impact on the number of welcoming and inclusive spaces available. In the short term, space renovations are underway in the Duderstadt Center; we believe we can impact this design.

5. **Develop talented and diverse college leadership, departmental leadership, and instructional and research faculty capable of providing a world class academic and research learning environment for a global, diverse student body. Our five-year objective is to develop a diverse instructional faculty with year-over-year increases in the percentage gender and URM representation.**
Despite some improvement, our instructional faculty is still not as diverse as we would like, particularly for underrepresented minorities. We have achieved a modest increase (19% to 20% in the past five years) in the gender faculty composition and half of the top leadership positions in the College are now filled by women faculty members. However, it remains difficult to increase the fraction of URM faculty (flat at 5%). Similar statements can be made about research faculty and lecturers. In Year 4, we will continue several key initiatives to increase the pipeline of diverse faculty candidates, improve our recruiting and hiring practices and provide coaching and mentoring for existing faculty members (tenured-track, research scientists and lecturers). These include our various NextProf future faculty workshops, leveraging our faculty development/leadership expert to coordinate mentoring efforts and participation in the learning event for faculty leaders (co-sponsored by ADVANCE). A key new initiative is the Transparency - Equity Project; this has the objective of bringing transparency on equity issues (reward measures, salary raises, awards, leadership opportunities, teaching/service assignments, resource allocation, etc.). Another initiative is the creation of a College Lecturer Advisory Committee which conducted focus groups and follow-up surveys for lecturers to assess needs.

6. **Recruit, develop, and graduate a talented and diverse body of students and postdoctoral researchers with the academic and multicultural skills to engineer solutions to tomorrow’s global challenges.** Our five-year objective is to achieve year-over-year increases in percentage of female and URM enrollment while reaching and maintaining parity on academic performance (GPA) and retention-to-graduation.

**Year 4 Update:**
During the past two recruiting years, we have seen modest improvements in the diversity of incoming classes. This is the direct result of proactive recruiting, leveraging outreach programs and school partnerships, the Michigan Engineering Zone (MEZ) serving 375 Detroit High School Students and Qualcomm Thinkabit (serving 3,000 Detroit middle school students) at Detroit Center, and Alternative Spring Break in Chicago with NSBE, SHPE, and SWE. We will continue these programs during Year 4. The College has chosen to continue funding for an expanded Michigan STEM Academy (M-STEM M-ENGIN). During the past year, we began implementation of a revised strategy for CEDO outreach strategy, with revamped approaches for our K-12 summer camps. In Year 4, we plan to investigate adding the SMASH program to our outreach portfolio and launching a new summer camp for artificial intelligence as part of a national AI4All initiative. Scholarship funding will continue as a key strategy; the College has funded scholarships for underrepresented master’s students and the Master's Bridge to the Doctorate.
With proactive leadership by the Student DEI Advisory Council, we held a student forum on the student climate survey. Plans are to follow this up with focus groups to better understand key climate issues identified within the survey.

7. **Recruit, retain, and develop a talented and diverse staff capable of supporting a world class academic and research learning environment for a global, diverse student and faculty population.**

**Year 4 Update:**

During Year 1 and 2, we focused on providing access to DEI training and encouraged participation through incentives. We also proactively engaged the staff community with the staff climate survey, holding town hall forums. During Year 3, the staff moved forward, organizing an active staff DEI committee that meets regularly, identifies initiatives and providing insight to the College DEI effort through active blogging on DEI topics. Important new initiatives center around embracing the College mission values of “Creativity/Innovation/Daring”. For example, staff DEI teams organized a Staff Innovation Day (March 8, 2019) highlighting conversations around Creative, Innovative, and Daring. In Year 4, the staff community will continue to provide professional and personal development in these core value concepts. The College will provide needed support for ongoing participation by staff in workshops offered by the University and the College.

8. **Design and develop resources and opportunities for engagement and interaction that facilitate a more equitable and inclusive learning environment for students.**

**Year 4 Update:**

As noted before, a key focus area for this objective is our work on inclusive teaching. We have reviewed our DEI activities for inclusive teaching and pulled this together into a comprehensive strategy/plan. During the year, we will drive this plan, coordinating college activities with university-wide efforts around inclusive teaching.

IV. **Goal-related Metrics – School, college or unit measures tracked over time**

**Year 4 UPDATE:** As noted before, metrics will be a prime focus area for the coming year.

**Original Plan Metrics:**

Diversity
Undergraduate and graduate student application, selectivity and yield data by demographic group
- Instructional and research track faculty application, selectivity and employment by demographic group
- Staff by job family, demographic group and staff/manager
- Postdoctoral fellow employment by demographic group

Equity
- GPA, time to graduation, and graduation rate by demographic group
- Faculty retention and promotion by demographic group
- Faculty leadership roles and honors (e.g. named professorships) by demographic group

Inclusion
- Students involved in extracurricular and co-curricular experiences by demographic group
- Climate measures (students, faculty, staff) - climate studies, online surveys, exit surveys, student responses at forums/focus groups, etc.

University-Deployed Metrics:

Undergraduate Students
Demographic Composition:
- Headcount
- Race/ethnicity
- Sex
Graduation Rates:
- 4-Year
- 6-Year
Enrollment:
- Entry status (new, continuing)
- Student class level (freshman, sophomore, junior, senior)
Climate Survey Indicators:
- Satisfaction with overall UM climate/environment
- Semantic aspects of the general climate of UM campus overall
- Semantic aspects of the DEI climate at UM campus overall
- Feeling valued at UM campus overall
- Feeling of belongingness at UM campus overall
- Assessment of UM institutional commitment to diversity, equity, and inclusion
- Perceptions of equal opportunity for success at UM campus overall
- Feeling able to perform up to full potential at UM campus overall
- Feelings of academic growth at UM campus overall
- Feelings of discrimination at UM campus overall
Graduate Students
Demographic Composition:
• Headcount
• Race/ethnicity
• Sex
Enrollment:
• Student class level (Graduate-Masters/Doctoral/Professional)
Climate Survey Indicators:
• Satisfaction with climate/environment in department of School/College
• Assessment of semantic aspects of the general climate in department of School/College
• Assessment of semantic aspects of the DEI climate in department of School/College
• Feeling valued in department of School/College
• Feeling of belongingness in department of School/College
• Assessment of department in School/College commitment to diversity, equity, and inclusion
• Perceptions of equal opportunity for success in department of School/College
• Feeling able to perform up to full potential in department of School/College
• Feelings of academic growth in department of School/College
• Feelings of discrimination in department of School/College

Staff
Demographic Composition:
• Headcount
• Race/ethnicity
• Sex
• Age (Generation cohort)
Climate Survey Indicators:
• Satisfaction with unit climate/environment in work unit
• Assessment of semantic aspects of the general climate in work unit
• Assessment of semantic aspects of the DEI climate in work unit
• Feeling valued in work unit
• Feeling of belongingness in work unit
• Assessment of work unit commitment to diversity, equity, and inclusion
• Perceptions of equal opportunity for success in work unit
• Feeling able to perform up to full potential in work unit
• Feelings of professional growth in work unit
• Feelings of discrimination in work unit

Faculty
Demographic Composition:
• Headcount
• Race/ethnicity
• Sex
• Tenure status

**Climate Survey Indicators:**

• Satisfaction with climate/environment in department of School/College
• Assessment of semantic aspects of the general climate in department of School/College
• Assessment of semantic aspects of the DEI climate in department of School/College
• Feeling valued in department of School/College
• Feeling of belongingness in department of School/College
• Assessment of department in School/College commitment to diversity, equity, and inclusion
• Perceptions of equal opportunity for success in department of School/College
• Feeling able to perform up to full potential in department of School/College
• Feelings of academic growth in department of School/College
• Feelings of discrimination in department of School/College
VI. Plans for Supporting, Tracking and Updating the Strategic Plan

YEAR 4 UPDATE:
The DEI Implementation Committee, led by Sara Pozzi, will continue to oversee the DEI strategy for the coming year. This committee will continue to guide and review progress as well as recommend course-corrections as needed. We will continue to look for new ideas and initiatives that may well supersede planned action items. Additional input and support comes from the Staff DEI Committee, the Student DEI Advisory Committee and the Dean’s External DEI Advisory Committees. We will leverage the Department DEI Leads to deploy initiatives and to share best practices across the departments. Yearly reviews and the Dean’s “state of the college” message will provide the stage for a broader conversation each year. We plan to continue the DEI lecture series and to hold periodic cultural engagement events during the academic year. We will continue to proactively share information about our initiatives with other units across campus, as well as learning from them.
List of Abbreviations

ADAA  Associate Dean for Academic Affairs
ADGE  Associate Dean for Graduate Education
ADR   Associate Dean for Research
ADUE  Associate Dean for Undergraduate Education
AUCC-DDEP Atlanta University Complex Consortium-Dual Degree Engineering Program
CAEN  Computer Aided Engineering Network
CEDO  Center for Engineering Diversity & Outreach
CoE   College of Engineering
CRLT  Center for Research on Learning and Teaching
DEI   Diversity, Equity, and Inclusion
grad-SWE Society of Women Engineers-graduate students
GSAC  Graduate Student Advisory Committee
GSI   Graduate Student Instructor
HR    Human Resources
IGR   Program on Intergroup Relations
LGBTQ Lesbian, Gay, Bisexual, Transgender, and Queer or Questioning
METS  Michigan Engineering Transfer Support Program
MORE  Mentoring Others Results in Excellence*
       *Rackham’s Faculty Committee on Mentoring
M-PACE Michigan Postdoctoral Association of the College of Engineering
M-STEM M-ENGIN Michigan STEM Academy, Engineering
OIE   Office for Institutional Equity
OSA   Office of Student Affairs
PPF   Presidential Postdoc Fellow
PPFP  Presidential Postdoc Fellowship Program
RCRS  Responsible Conduct of Research and Scholarship
RPM   Resource Planning and Management
SDEIC Staff DEI Committee
SHPE-grad Society of Hispanic Professional Engineers-graduate students
SMES-grad Society of Minority Students-graduate students
SSD   Services for Students with Disabilities
STEM  Science, Technology, Engineering, and Mathematics
STRIDE Committee on Strategies and Tactics for Recruiting to Improve Diversity and Excellence

URM Under-represented Minorities*

*as defined by National Science Foundation. This group includes persons identified as African-American/Black, Hispanic, and Native American.
The College of Engineering (CoE) is committed to act responsibly when it learns of incidents or conflicts; this includes situations that appear to be motivated by hate or bias. There are existing pathways within the College for conflict resolution for faculty, students, and staff. When the conflict is of a nature that appears to have a DEI component, the College will leverage University processes and resources including the Office of Institutional Equity (OIE). For acts of intolerance or that may violate University policies or community standards, we will pursue a range of remedies that may include community education and dialogue as well as disciplinary action. Should the conflict escalate to a level that constitutes a criminal act such as assault or property damage, the situation will be reported to law enforcement for full investigation.

**Faculty**

Incidents involving faculty brought to the College by OIE or other channels are addressed by the Associate Dean for Academic Affairs, working with the relevant parties in CoE and the University. For issues raised by faculty that cannot be normally resolved, the College of Engineering has a formal grievance process documented in the College Faculty Rules. The College Ombuds, formally elected by the faculty, assists in the resolution of disputes and provides information about grievance procedures as needed to affected parties. In addition, the Dean may direct the department or the College Executive Committee to reconsider a dispute if the Dean thinks a mistake in evaluation judgment may have occurred. No action by the Dean or other party, however, will deny a grievant continuing access to the prescribed appeal procedures.

**Students**

The Office of Student Support (OSS), within the CoE Office of Student Affairs (OSA), provides a safe and confidential environment to discuss concerns, and advises faculty, staff, and students on matters related to emergencies, crisis situations, grievances, and disputes. OSS also provides information about College and University policies and procedures, makes referrals, and offers resources when appropriate. These resources include: hate/bias incidents and response, sexual misconduct policies/procedures, resolution services both within OSS and Office of Student Conflict Resolution (OSCR), Ombuds, and Rackham, as well as other DEI and
climate-related resources and support. Particularly difficult or systemic issues are addressed by the Associate Dean for Undergraduate Education or Associate Dean for Graduate Education.

**Staff**

For conflict issues arising with staff members, appropriate College staff (typically the immediate supervisor) will determine the possible next steps, explain the relevant processes, and offer counseling and support or referral to other offices that may provide support. Initial issues are addressed by the immediate supervisor working in conjunction with the Office of CoE Human Resources. For matters related to DEI, issues are referred to the Office of Institutional Equity. The College also encourages use of the University Bias Response process as appropriate.
College of Engineering Programs

Listed below are CoE programs designed to enhance diversity, equity, and/or inclusion implemented at the college level. All programs listed are open without regard to gender, race, ethnicity, etc., except for the NSF-funded Michigan Louis Stokes Alliance for Minority Participation, which follows federal guidelines for this program.

**Center for Engineering Diversity and Outreach**
CEDO works to (1) create a pool of diverse students who enter Michigan Engineering; (2) foster academic success of diverse students (3) showcase multicultural perspectives in engineering; (4) advocate policies for diversity and inclusion; (5) promote appreciation and understanding of diverse individuals and groups; and (6) demonstrate the importance of multicultural competency.

**Contact:** Lyonel Milton  
**Collaborators:** Industry, engineering faculty researchers, K-12 educators, School of Education, Center for Educational Outreach

**Michigan Engineering Zone (MEZ)**
The MEZ is a forum located in the U-M Detroit Center where Detroit students acquire the knowledge and tools they need to propel themselves to higher education and careers in science, technology, engineering, and mathematics through challenging and exciting hands-on experiences.

**Contact:** Jeanne Murabito  
**Collaborators:** Industry, K-12 educators

**First Generation Initiative**
A College of Engineering initiative to support first generation students.

**Contact:** Jeanne Murabito  
**Collaborators:**
First-Year Student Recruitment Programs
The College of Engineering’s first-year student recruitment programs bring select groups of students in for campus visits and participation in admitted student weekends. A post card writing campaign by select student groups to admitted underrepresented students is part of the recruitment conversion effort.
Contact: Jeanne Murabito
Collaborators:

M-STEM Academies
The M-STEM (Michigan Science, Technology, Engineering and Mathematics) Academies provide students with a supportive and academically rigorous experience during that critical transition from high school to college. Our increasingly global workforce demands rigorous technical training, entrepreneurial mindsets, multicultural competencies, and intellectual curiosity.
Contact: Darryl Koch
Collaborators: LSA, industry

Michigan Louis Stokes Alliance for Minority Participation
The Michigan Louis Stokes Alliance for Minority Participation (MI-LSAMP) was established in 2005 to address the need for greater retention and representation in science, technology, engineering, and mathematics (STEM) education and degree attainment, and the associated workforce, by individuals from certain demographic groups, most notably African American, Hispanic and Native American. MI-LSAMP is a federally funded collaborative effort of Michigan universities designed to share best practices and resources to achieve excellence in U.S. STEM education to support the development of a diverse and well-prepared workforce and well-informed citizenry. MI-LSAMP’s funding comes from the National Science Foundation and allows the College of Engineering to create a program initiative specifically focused on underrepresented minority students, as this is a federally funded program.
Contact: Derrick Scott
Collaborators: LSA, Undergraduate Research Opportunity Program, Michigan State University, Wayne State University, Western Michigan University, 14+ Michigan community colleges
Scholarship Partnership Initiatives
College of Engineering partnerships with partner schools, the National Action Council for Minorities in Engineering, and select companies to provide scholarship support for increasing diversity, equity, and inclusion on campus.
Contact: Jeanne Murabito
Collaborators: Partner schools nationwide, industry, NACME

High School Partnership Initiatives
This initiative allows a focus and an opportunity for College of Engineering faculty and staff to work closely with staff, students, and families at partner high schools. Several these schools have significant underrepresented and/or low socio-economic populations.
Contact: Jeanne Murabito
Collaborators: Partner schools nationwide

Atlanta University Center Consortium - Dual Degree in Engineering Program
A College of Engineering partnership with Historically Black Colleges and Universities, Clark Atlanta University, Morehouse College, and Spelman College for engineering students at the transfer level.
Contact: Jeanne Murabito
Collaborators: HBCUs

Alternative Spring Break - Chicago
Alternative Spring Break in Chicago is a collaborative effort conducted via the Society of Women Engineers, the National Society of Black Engineers, and the Society of Hispanic Professional Engineers that entails a week in Chicago public schools and community-based educational programs teaching engineering through hands-on design projects. It provides a comprehensive opportunity to engage students and model what it is like to be a college student studying engineering.
Contact: Jeanne Murabito
Collaborators: Chicago public schools and community-based educational programs
K-12 Outreach: Engineering OnRamp
The Engineering OnRamp (EO) serves as a pathway for a diverse group of pre-college students to discover engineering as a profession and choose the U-M College of Engineering as the place where they want to prepare for their future. We do this through summertime camps and year-round activities that help students:
- Explore a variety of engineering disciplines
- Expand their vision of what they can achieve, and
- Experience tackling real-world challenges at the CoE
Contact: Kharena Coleman
Collaborators: Industry

Creativity, Innovation & Daring (CID) – Investing in Innovation
This program provides staff opportunities to pursue projects that require funding to promote, enhance and celebrate creativity, innovation, and daring across Michigan Engineering. Grants will be awarded for projects aligned with the vision/mission/values of the college.
Contact: Ruthie Freeman
Collaborators:

Engineering Career Resource Center (ECRC)
The ECRC offers specific workshops and events for M-STEM/M-ENG, transfer students, and international students as well as for student organizations such as the Society of Women Engineers, the National Society of Black Engineers, and the Society of Hispanic Professional Engineers.
Contact: Kerri Boivin
Collaborators: Industry

International Programs in Engineering (IPE)
The mission of the IPE office is to prepare College of Engineering graduates for success in the global engineering profession by helping all CoE students gain international experience. The international experience can help students develop cultural awareness, leadership qualities, communication skills, and professional development.
Women in Science and Engineering (WISE)
The WISE program’s goal is to increase the number of women students who choose majors, advanced degrees, and careers in science, mathematics, and engineering. All interested students may participate.
Contact: Cinda-Sue Davis
Collaborators: Donors, partner universities, industry, alumni

Dean's Advisory Committee on Female Faculty (DACFF)
The DACFF assists the Dean by identifying and prioritizing best practices to recruit, retain and promote women faculty members in the College while serving as an advocacy group for women engineering professors.
Contact: Allison Steiner
Collaborators:

Dean's Advisory Committee on Faculty of Color (DACFC)
The DACFC assists the Dean by identifying and prioritizing best practices to recruit, retain and promote under-represented minority faculty members in the College while serving as an advocacy group for minority engineering professors.
Contact: Chinedum Okwudire
Collaborators:

Faculty Search Procedures
College of Engineering procedures to motivate and assist faculty search committees in creating diverse candidate pools and reducing unconscious bias in assessing candidates.
Contact: Michael Wellman
Collaborators: U-M ADVANCE
NextProf Future Faculty Workshop
NextProf is a program for doctoral students in or beyond the fourth year of study and postdoctoral scholars who are interested in pursuing academic careers in engineering, who are committed to promoting diversity in higher education, and who are one to three years away from beginning a job search with the goal of diversifying the face of academia.
Contact: Mary-Ann Mycek
Collaborators: Rackham, LSA, faculty and administrators from engineering schools across the country

Graduate Student Recruitment Programs
Graduate student recruitment programs include application fee waivers; funded visits for approximately 100 undergraduates to the Engineering Graduate Symposium to learn about research and meet faculty; funded department visit weekends for approximately 250 prospective graduate students; funded opportunities for U-M undergraduate students to do summer research (SURE Program); funded opportunities for non-U-M undergraduate students to do summer research (SROP Program, in partnership with Rackham); masters fellowships (tuition fellowships to incoming masters students, selected using RMF criteria); sponsored interactions that pair graduate students, for example from grad-SWE and SHPE-Grad, and undergraduate students; recruiting at national meetings including SHPE and NSBE. National Sponsor of the 2014 SHPE National Conference (Detroit, November 2014).
Contact: Jeanne Murabito
Collaborators:

Graduate Student Retention Programming
Retention programs include workshops on common graduate student concerns; sponsored interactions that pair PhD students with master’s students; leadership summit of graduate student society leaders; graduate student community grant program; social events; emergency funding for students; coordination of sponsored fellowship processes.
Contact: Mary-Ann Mycek
Collaborators: Rackham, CEDO, Counseling and Psychological Services, International Center, CRLT Players, etc.
Graduate Student Advisory Committee (GSAC)
Representatives from graduate programs and major graduate student societies identify
priorities, help plan activities, and address areas of concern.
Contact: Mary-Ann Mycek

Collaborators:

ADVANCE Program
Collaboration with the U-M ADVANCE Program: mandated attendance at STRIDE workshops
for College of Engineering faculty on search committees; launch committees for all new
untenured faculty; leadership coaching for new full professors and new chairs; climate surveys.
Contact: Jennifer Linderman
Collaborators: ADVANCE Program

Center for Entrepreneurship Undergraduate Academic Programs
The Center for Entrepreneurship runs undergraduate academic programs focused on teaching
students the mindset and skills needed to innovate in today’s rapidly evolving industries.
Students learn about problem solving, networking, team building and more through hands-on
entrepreneurial experiences. It has been nationally documented that women and other
minorities between the ages of 18 and 24 are very underrepresented in entrepreneurship and
business creation. At CFE, our undergraduate students are made up of 30 percent women and
11 percent other minorities, well above the national average. CFE aims to increase those
numbers through directed marketing efforts and outreach in the coming year and is working to
further expose students to the importance of understanding underrepresented groups in
entrepreneurship through new undergraduate curriculum and opportunities.
Contact: Jonathan Fay
Collaborators: Donors, industry

Center for Entrepreneurship Graduate Academic Programs
Graduate academic programming at the Center for Entrepreneurship has significantly evolved
over the past year. CFE’s technology-innovation program is designed to expose students in
STEM-based disciplines to entrepreneurial ways of thinking as it relates to technical fields. In
the past year, women represented 27 percent of CFE’s graduate program population and under-represented minorities made up 16 percent.

Contact: Jonathan Fay
Collaborators: Donors, industry

Center for Entrepreneurship Student Startup Treks
CFE has developed a Startup Trek program with two objectives: bringing students to entrepreneurial hubs to learn about what makes those ecosystems thrive and connecting student startups to alumni and industry partners that can provide mentorship and networks to make them more successful. Every year, CFE takes student startup teams to San Francisco for the Weather Underground Startup Trek (WUST). CFE’s application team looks to bring a diverse and dynamic group of students on the trek, selecting students with unique cultural backgrounds and perspectives.

Contact: Jonathan Fay
Collaborators: Donors, industry
College of Engineering Organizations

Listed below are organizations of students, staff, and faculty within the college that focus on diversity-related issues. Some voluntary student organizations are also included. All organizations are open without regard to race, ethnicity, gender, etc. and comply with the University of Michigan’s nondiscrimination policy.

**Center for Engineering Diversity and Outreach**
CEDO works to (1) create a pool of diverse students who enter Michigan Engineering; (2) foster academic success of diverse students (3) showcase multicultural perspectives in engineering; (4) advocate policies for diversity and inclusion; (5) promote appreciation and understanding of diverse individuals and groups; and (6) demonstrate the importance of multicultural competency.

**Contact:** Lyonel Milton

**American Indian Science and Engineering Society (AISES)**
The mission of AISES is to substantially increase the representation of American Indian and Alaskan Natives in engineering, science and other related technology disciplines.

**Contact:** aises.members@umich.edu

**girls in Electrical Engineering and Computer Science (gEECS)**
gEECS is an organization dedicated to supporting female students pursuing degrees through the EECS department, including degrees in Computer Science, Computer Engineering, and Electrical Engineering.

**Contact:** Kayla Fedewa (kafedewa@umich.edu)

**Graduate Society of Women Engineers (GradSWE)**
GradSWE plans a plethora of events to help female graduate engineers, and any other interested graduate students, integrate into a successful tenure as a graduate student.
Ingenieros
Ingenieros is a student-based organization committed to providing an environment for the practice of Spanish language skills. It also aims to encourage the understanding and celebration of Hispanic culture not only in the College of Engineering, but also in the University of Michigan as a whole.
Contact: ingenieros@umich.edu

Indian Student Association (ISA)
The Indian Students’ Association is a group of graduate and undergraduate students of Indian origin studying at the University of Michigan, Ann Arbor. The association aims to create a social network amongst the Indian community on campus. The association also aims to participate in various activities organized by the University along with other student organizations, thereby contributing to the diversity on campus.
Contact: Kush Goliya

Jewish Engineering Association (JEngA)
JEngA provides a community for Jewish undergraduate and graduate students while promoting the awareness and development of Jews in the field of engineering.
Contact:

Korean-American Scientists and Engineers Association (KSEA)
KSEA is an organization that promotes academic networking and professional development among Korean-American students in the science and engineering fields.
Contact: ksea.michapter@gmail.com

Michigan Baja Race Team
The Michigan Baja Race Team is an entirely student-run competition team housed within the College of Engineering. Every year the team designs and manufactures an entirely new race vehicle from the ground up. This effort takes a variety of skilled and ambitious team members
who design all the system components in CAD and integrate them together. These systems include the frame, drivetrain and transmission, fuel system, suspension, brakes, panels, and guards. Student team members are responsible for raising donations and working with material and manufacturing sponsors in the area.

Contact: Justin Lopas, jlopas@umich.edu

Movement of Underrepresented Sisters in Engineering and Science (MUSES)
MUSES is an organization designed to provide a unique support structure for women of color pursuing advanced degrees at the University of Michigan.

Contact: Christian Greenhill, musescommittee@umich.edu

MRacing Formula SAE Team
Formula SAE is a collegiate motorsport racing series in which students use technical innovation and advanced engineering analysis to build formula style racecars. Teams design and build a completely new car each year, taking knowledge from previous years and unprecedented innovations out to the track. Fifteen competitions around the world test each team’s designs from every aspect with dynamic, design theory, cost, and business events. This experience in cradle-to-grave applied engineering gives the students a strong competitive advantage after college and prepares them for the best engineering jobs in the world. International competitions also expose the team to different cultures and approaches to engineering.

Contact: Joe Hendrickson, mracingmanagement@umich.edu

Muslim Engineering Student Association (MESA)
The mission of MESA is to unite Muslim engineering students on campus to create an inclusive community, existing within the scope of the larger Muslim community on campus.
MESA seeks to provide opportunities for Muslim engineering students to know each other, communicate, and collaborate.

Contact: mesa.officers@umich.edu

National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE)
NOBCChE is dedicated to building an eminent cadre of people of color in science and technology.
National Society of Black Engineers (NSBE)
NSBE’s mission is to increase the number of culturally responsible Black engineers who excel academically, succeed professionally, and positively impact the community.
Contact: Raymond Smith-Byrd, nsbe.eboard@umich.edu

Network for Women in Civil and Environmental Engineering (NeW in CEE)
NeW in CEE’s mission is to provide female undergraduate and graduate students at the University of Michigan with the mentorship, support and guidance necessary to achieve excellence in the Civil and Environmental Engineering field.
Contact: Qianru Guo, qianru@umich.edu

Out in Science, Technology, Engineering, and Mathematics (O-STEM)
O-STEM’s mission is to provide networking, professional development, and social activities for undergraduate and graduate LGBTQ and ally students in the fields of engineering, science, technology, and math.
Contact: Caitlyn Hines, oSTEM-board@umich.edu

Phi Sigma Rho
Phi Sigma Rho is a social sorority for women in engineering and engineering technologies. Phi Sigma Rho was founded by Abby McDonald and Rhasmi Khanna at Purdue University. Phi Sigma Rho was then founded on September 24, 1984 with the balance of sisterly bonding and academic success in mind.
Contact: Samantha Steinberg (PhiRhoPresident@umich.edu)

Shanghai Jiao Tong University Alumni Association at the University of Michigan
The purpose of this organization is to establish an active social network among the students, scholars, and alumni of Shanghai Jiao Tong University (SJTU) at the University of Michigan in Ann Arbor and the Ann Arbor area.
Contact: Zhiyi Fan, sjtuaum.president.2015@umich.edu

Society of Asian Scientists and Engineers (SASE)
SASE’s mission is to prepare Asian scientists and engineers for success in their careers and the global business world. The SASE-UM chapter has a mission to establish an active presence of Asians in engineering and science on campus and engage in the community by emphasizing each individual’s technical skills.

Contact: Linda Wu, sase.board@umich.edu

Society of Hispanic Professional Engineers (SHPE)
SHPE empowers the Hispanic community to realize their fullest potential and impacts the world through science, technology, engineering, and math awareness, access, support, and development.

Contact: Alex Lopez, shpe.eboard@umich.edu

Society of Hispanic Professional Engineers – Graduate Committee (SHPE-Grad)
SHPE-Grad is a student-led organization whose primary goal is to function as a professional and social network for Hispanic/Latino graduate students at the University of Michigan.

Contact: Ana Rioja, shpe.grad.board@umich.edu

Society of Minority Engineers and Scientists - Graduate Component (SMES-G)
The objective of SMES-G is to address critical graduate student issues such as graduate school admissions, balancing research and social life, and deciding between academic and industrial careers as they relate directly to minority students.

Contact: smesgcommunications@gmail.com

Society of Women Engineers (SWE)
The mission of SWE is to encourage women to excel as engineers and leaders, and to promote an inclusive community within the College of Engineering and the profession that fosters universal success in engineering, independent of gender.

Contact: Caitlyn Hines, swe.info@umich.edu

Unified Minority Mechanical Engineers (UMME)
UMME is established for the recruitment, retention, and successful graduation of its mechanical engineering student members.

Contact: Arinze Nwankwo, umme-eboard@umich.edu
Services for Students with Disabilities
Two psychologists from the Services for Students with Disabilities office rotate for weekly office hours in the College of Engineering. The Office of Student Support and Accountability supports these office hours by providing referrals for students.
Contact: ssdoffice@umich.edu