

DEI Council Report to Dean  
Academic Year 19-20  
submitted June 2020

The College of Engineering DEI Council was formed November 1, 2018 with Michelle Scherer and Jan Waterhouse as co-chairs. Cathy Koebrick replaced Jan Waterhouse when Jan took a position in central HR and several new members have been added over the last year and a half as additional representation was requested.

### **DEI Council Charge**

- Provide leadership within the College of Engineering to promote and achieve a culture that values diversity, equity, and inclusion (DEI), especially racial/ethnic and gender diversity, as evidenced by the College's policies and practices;
- Assess the current state of the College of Engineering climate for DEI;
- Lead the creation of the College of Engineering's Diversity, Equity, and Inclusion Action Plan with input from faculty, staff, and students; oversee implementation of the Action Plan; assess the effectiveness of outcomes of the Action Plan; and
- Advise the College about strategies and best practices related to recruitment and retention of female and underrepresented faculty, staff, and students.

### **DEI Council Vision Statement**

We envision an equitable and inclusive environment in the College of Engineering that recruits, develops, and retains a diverse community that thrives as engineers, educators, and administrators.

### **DEI Council Mission Statement<sup>1</sup>**

Do a comprehensive (quantitative and qualitative) equity analysis across all levels of college. Be alert to, and **be willing to change, policies and structural issues** to make sure they are designed so that **everyone is treated equally** (i.e., use universal design). **Maximize each individual's potential** by transparent and equitable allocation of resources (this is the inverse of the squeaky wheel gets the grease). Update our evaluation and promotion processes to **hold people accountable** for doing their job and implementing equitable and inclusive practices. Assess the climate through surveys and a series of listening posts with small groups representing different ranks, demographics, and **perspectives**. Create re-occurring, sustainable programs that make people feel included and that they have a voice. Market the equitable and inclusive environment and what a great place it is to work and study here and then recruit and retain people from diverse cultures to create a more productive and inclusive community.

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<sup>1</sup> Adapted from the Six Principles for An Inclusive Academy (Stewart and Valian, 2018, MIT Press)

### **College of Engineering Diversity, Equity, and Inclusion Council Members (2019-2020)**

Michelle Scherer	Co-Chair, Professor, Faculty At-Large Member
Cathy Koebrick	Co-Chair, Director of Human Resources
Nicole Grosland	Associate Dean for Academic Programs
Erwei Bai	DEO of Electrical & Computer Engineering
Brianna Marcelo	Director of UI Diversity Resources and Strategic Initiatives
Priyadarshini Pennathur	Associate Professor, Industrial and Systems Engineering
Josh Atcher	Director of Academic Resources and Support
Kristin Lang	Director, Undergrad Diversity Programs and Academic Advisor
Dan McGehee	Associate Professor, Industrial and Systems Engineering
Hanley Sayavong	COE student alumni – CBE, 2018
Karina Foster-Middleton	Undergraduate Student, BME; UI Student Accommodation Coordinator
Marisol Contreras	Graduate student, CBE
Mohammed Elobeid	Undergrad Student, Mechanical Engineering; member of NSBE
Kristina Venzke	Admin for DEI Council and Assistant to AD for Graduate Programs, Research & Faculty

## Update/Summary of DEI Council Recommendations

1. Create a charter for the DEI council that details policies and processes associated with membership.
2. Complete a diversity audit.
  - We have surveys and LPs of climate.
  - Review current college policies, procedures, and structures.
  - Gather and analyze quantitative data (*done*)
  - Conduct a college-wide equity analysis of salary and workload.
  - Start doing Faculty exit interviews.
  - Review promotion and tenure guidelines and modify to recognize and explicitly include DEI efforts.
  - Complete CUPA-HR DEI Maturity Index with DEI Council to assess CoE.
3. Evaluate internal communication process and develop an effective process for collecting and disseminating college news to faculty and staff.
4. Develop clear guidelines on how to conduct faculty and staff searches to minimize bias and recruit a diverse pool.
5. Consider creating a **Counselor in Residence** for undergraduate and graduate students to help maintain and promote mental health wellness.
6. Consider identifying a faculty member to serve as a **faculty/staff ombudsperson** in the college.
7. Look for opportunities to apply for grants to help foster diversity (e.g. NSF Advance).
8. Consider creating a K-12 pipeline program. For example, a Hawkeye Pathways program modeled after Michigan's Wolverine Pathways program.
9. Create a sustainable plan to educate and train faculty, student, and staff on how to create and foster an equitable and inclusive culture in the college and classroom.
  - Make use of BUILD, Building a Global Community, SafeZone programs offered through University.
  - Include some BUILD content in first year success seminar or somehow make it accessible to students.
  - Training for faculty on classroom practices and behavior that foster DEI.
  - Have college of engineering activities for first generation students, URM, females, international students (both undergrad and graduate) during their first year.
10. Make college resources more visible and accessible to everyone.
  - Expand the DEI website to be more accessible and comprehensive.
  - Clearly identify student organizations and their target groups.
11. Create programming to build a stronger sense of community and belonging.
  - Regular lunch and learns with Assistant Professors. (*done and on-going*)
  - Support and host a graduate student conference. (*done and on-going*)

**DEI Council Accomplishments**

*Inclusion*

- Supported and hosted a full-day **Celebrating Diversity in Engineering Graduate Conference**.
- Created and delivered a **Celebrating Diversity Undergraduate Seminar** to 514 first year engineers in ENGR:1000 Engineering Success for First Year Engineers.
- Created **DEI Initiative Awards** (e.g., DEI book club, study of COE URM students, refurbish lactation room)
- Launched a lunch and learn program for Assistant Professors (*transitioned to ADGP now*).

*Equity*

- Created Policy on Teaching Release for Addition of a Minor Child (AY 18-19)
- Conducted fifteen Listening Posts (AY 18-19, analysed in 19-20)
- Planned a faculty, staff, and leadership DEI workshop (*cancelled because of COVID*).
- Awarded \$6,000 for undergraduate diversity scholarships.
- Awarded \$11,048 in DEI Initiative Awards.
- Awarded up to \$9,000 for professional development / DEI conferences for ugrad/grad students (*some cancelled because of COVID*)

*Diversity*

- Gathered and analyzed compositional data on students, staff, faculty.

**Celebrating Diversity Undergraduate Seminar**

This work was conducted as part of a teaching as research project developed for the Center for the Integration of Research, Teaching, and Learning (CIRTL) at the University of Iowa by graduate students Luiza Notini and Matt Nagorzanski with help from Prof. Michelle Scherer. The project aimed to evaluate how discussions and activities related to diversity change engineering student’s perceptions and celebrations of diversity. The project was implemented with 514 incoming freshman engineering students enrolled in the first year Engineering Success Seminars in the Fall of 2019. The workshops were given to four groups of approximately 130 students each, in the week of October 14-18, 2019. To learn about student’s perception, we developed a survey, and students were randomly divided into two groups: the ones that were invited to take



Cloud of the words students used to describe ways they bring diversity to the University of Iowa Engineering freshman students group.

the survey before a seminar and were invited to take the survey after a seminar. The survey was developed by us and asked questions to understand student's perspectives as a diverse being, their appreciation for diversity in others, and their willingness to share what makes them diverse. The surveys were completed using the Qualtrics platform, and they were not mandatory, and all information was recorded without direct identifiers (i.e., without a name or personal identification code such as university ID number, etc.).

Most engineering programs across the U.S. have disproportional representation of minorities compared to the overall population, and rates of course completion are usually lower for minorities. It is challenging though to find effective tools to create an environment that fosters belonging in engineering education. Here we investigate whether talking about diversity in a one hour engineering undergraduate seminar shifts students perceptions of diversity. We conducted two activities to explore student's personal perceptions of whether they contributed to diversity in the engineering school and how they would introduce fictional students to the class. We surveyed half of the students before the seminar and half after to evaluate if student perceptions shifted. The survey evaluated student's perception as diverse beings, their appreciation for diversity in others, and their willingness to share their diverse side. It also demonstrates that students that can identify diverse aspects of themselves are significantly more open to talking about diversity. When asked how fictional students should introduce themselves to the class, about 45% of the students chose to share a fact that brings diversity to the group and more impressively, this number significantly increases after our seminar on diversity. Importantly, our results showed that freshmen engineering students think it is important to talk about diversity.

### **Celebrating Diversity in Engineering Graduate Conference**

The Diversity, Equity and Inclusion Council at the College of Engineering hosted its 1st annual Celebrating Diversity in Engineering Conference for the graduate student body on January 24, 2020. Eighty-one students attended, with representatives from all six departments. The theme of the conference was "Celebrating Diversity in Engineering" with an emphasis the importance of students remaining true to their self and social identity, especially in STEM. The agenda was filled with many events including a research art gallery, a keynote speaker, a panel, a social networking event, and concurring workshops about diversity in the workplace, the realities of being in academia vs. industry, sustainability and more hosted by local and national prominent speakers.

The keynote speaker was Dr. Gina Guillame-Joseph, an Information Systems Engineer at The MITRE Corporation in McLean, Virginia. Dr. Guillaume-Joseph also serves as an Adjunct Professor and Doctoral Research Advisor at the George Washington University supporting students pursuing their doctorate in Systems Engineering. She currently serves as director of the International Council on Systems Engineering (INCOSE) Foundation STEM Initiative where she recognizes, advocates for, and supports ongoing academic programs and initiatives that support Empowering Woman as Leaders in Systems Engineering (EWLSE) goals including Science, Technology, Engineering, and Mathematics (STEM) and K-12 initiatives, Engineering Week, science fairs and engineering competitions, integrating systems engineering and systems thinking into the education of all engineers.

## Conference Agenda

Opening Ceremony – Keynote Speaker Dr. Gina Guillaume-Joseph, MITRE	9:00am - 10:00am
<b>Parallel Sessions #1</b>	10:15am - 11:15am
How to Identify and Disrupt Bias	
So, You Want to Be a Professor?	
From Academics to Industry	
<b>Parallel Sessions #2</b>	11:30am - 12:30am
Navigating to Your Ideal Job & Salary	
Sustainability and You	
Overcoming Imposter Syndrome	
<b>Lunch &amp; Research Art Gallery</b>	12:30pm-2:00pm
<b>Parallel Sessions #3</b>	2:00pm - 3:00pm
Get to Know Your Peers (Activity)	
Engineering for Social Justice	
YOU Can Start a Business!	
<b>Closing - Large Group Panel Discussion</b>	3:15pm – 4:15pm
Embracing Your Identity in the Workplace and Beyond	
<b>Mocktail Networking Hour and Raffle</b>	4:15pm – 5:00pm

### DEI Initiative Awards

DEI Initiatives Funding Recipients – FY20	
Diversity Reading Group: To establish a forum for community members to be able to explore issues related to diversity and equity through discussion of readings from a broad variety of sources and to help establish a sense of community within the COE, above and beyond our specified roles at work	\$1,250
Support for Female Alliance of Civil Engineers (FACE) Group Meetings Speakers – to fund speakers for career workshops, visiting female speakers from companies and local governments in Iowa, and group discussions of the difficulties being a gender minority in Engineering	\$300
International Education Week: A reception in the Seamans Center Student Commons to celebrate IEW week and share the importance of global engagement in engineering	\$350
Guest Speaker on Minority Recruitment in Grad Programs – Submitted by BME, this project invites Moises Orozco Villacana, Director of Enrollment Management at the University of Illinois at Urbana-Champaign, School of Information Sciences, to speak in COE	\$1094
Research Project support: Minority Undergraduate Engineering Students at UI: Characterizing Their Successes and Struggles With a Research-Based, Data-Driven Approach	\$5,000
Joint submission by BME and CBE: Guest speaker Dr. Jennifer Linderman is a Professor of Chemical and Biochemical Engineering at the University of Michigan and Director of the University of Michigan’s ADVANCE Program. NSF ADVANCE programs have been contributing to the support of workplace initiatives that promote equity for STEM faculty that could serve as a model for COE	\$2134
Mayors Youth Empowerment Program STEM workshop with a COE Student Org: This proposal seeks to broaden COE’s sphere of diversity, equity, and inclusion to promote awareness and understanding for those with intellectual disabilities in the community by pairing the MYEP participants with a COE student org	\$250
Learning at Lunches Workshops focused on the issues faced by First Generation College Students and Food Insecurity on College Campuses	\$400
Berimbau Workshop: The NEXUS of Engineering and the Arts will collaborate with the Department of Dance in presenting a Berimbau making workshop in the College of Engineering led by Silvio dos Reis. This cross-disciplinary collaboration will be an opportunity for students to explore technical and cultural ideas that can only enrich and enhance their UI experience.	\$270