



Diversity, Equity and Inclusion Committee Roadmap

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Building and Valuing DEI Skills

The implementation of this pillar will aim to ensure that each person gains awareness and skills around DEI principles and best practices during their time in the department.

Objectives

1. Sharing DEI Resources with the CEE Community
2. Executing CEE Department DEI Certificate
3. Communicating Value of DEI Education
4. Evaluating Success of Departmental DEI Education

What Success Looks Like

- **Sharing DEI Resources with the CEE Community:** At least once a year, update DEI resources available on our website for independent learning.
- **Executing CEE Department DEI Certificate:** Create a CEE department-wide DEI certificate. By the third year of the roadmap, 80% of CEE's members will have attended at least two DEI events that year and 60% will have completed the certificate.
- **Communicating Value of DEI Education:** Starting at orientation and continuing through departmental communication each year, stress the importance of DEI education. Host a yearly town hall to update the community on progress.
- **Evaluating Success of Departmental Initiatives:** Develop and implement metrics to assess the effectiveness of department-led DEI workshops and identify areas for improvement in current efforts.

Activity Details

Sharing DEI Resources with the CEE Community

1. *Create CEE DEI resources webpage*
By February 2021, share resources on the CEE DEI website for individuals to continue their DEI education independently. These will include resources for students, faculty, and staff; and will be organized based on themes.
2. *Update CEE resources webpage*
At least once per year, reassess the resources included and add any newly available resources and pare down unnecessary ones.

Executing CEE Department DEI Certificate

1. *Create structure of the DEI Certificate*
During winter term 2021, build the framework for a certificate program that incorporates both workshops and hands-on options to apply learning.
2. *Track DEI workshop attendance by department community*



Starting in 2021, every community member will be expected to attend a minimum of one individual event of their choosing and at least one event offered by the CEE DEI committee each year. These workshops will contribute to and complement any workshops that community members complete each year. These on-going events will ensure that our community becomes more knowledgeable and comfortable with DEI topics. For the sake of our tracking, we will broadly define a “workshop” as including seminars and panels whose primary purpose is information transfer and workshops and other events with a significant hands on component.

3. *Roll out CEE DEI Certificate*

Over the summer and at the start of fall term 2021, the department will communicate about the certificate (see “Communicating Value of DEI Education” for more details).

4. *Create a landing page for the DEI certificate*

This webpage, created in Summer 2021, will have the details for the CEE DEI Certificate program.

5. *Track DEI certificate participation and completion*

The department will track the number of workshops/seminars/educational opportunities surrounding DEI being attended by the community. A template for an annual report on participation in DEI workshops will be created during winter term 2021. After release to the department, the information will be made public on the website. This will also be shared at an annual event (see: “Communicating Value of DEI Education”)

6. *Develop CEE specific events*

To complement the workshops and seminars taking place outside of CEE, CEE-specific events will also be created. These will include presentations by those integrating DEI into their CEE research to the department, as well as a specific CEE mentor-mentee workshop that will be offered yearly for all graduate students and faculty. Over time, these will be updated to reflect the current needs of the community (see “Evaluating Success of Departmental Initiatives” for more information).

Communicating Value of DEI Education

1. *Departmental communication from department chair and unit administrator on DEI*

Regular communication from departmental leaders is essential for conveying the importance of DEI education for all members of our community. This will include announcing university-wide DEI efforts, including a yearly email from the department chair at the start of the fall semester to encourage graduate students to apply for the Rackham DEI certificate. During winter 2021, an email from the department chair will announce the creation of the DEI Certificate. Emails at the start of each semester from department chair and unit administrator will encourage students, faculty, staff, and postdocs to remind our community to participate in the DEI certificate and provide an update of other upcoming department-specific efforts.

2. *Department-wide events to share DEI progress*

To celebrate and report back on the DEI progress in our department, there will be a yearly town hall to share the progress on the roadmap across all pillars. Data on workshop attendance by the community and department demographics will be shared. There will be a raffle at this event with more tickets depending on the number of



workshops attended. At the 2021-2022 town hall, a logo for the DEI certificate will be unveiled. This logo will be used to advertise the DEI Certificate and be added next to faculty and staff names on the website to indicate who has completed it.

3. *Incorporate DEI into orientation efforts*

Time during CEE department orientation will be allocated to advertise the Rackham and CEE DEI certificates, and to communicate how societal injustice has manifested in engineering, and our responsibilities as Civil and Environmental engineers to promote DEI in our communities.

Evaluating Success of Departmental Initiatives

1. *Assess baseline department-wide comfort*

Survey department (with at least 50% response rate) to determine the comfort and mindset of postdocs, students, faculty, and staff.

2. *Evaluate success of individual events*

A post-event survey will be developed that can be easily adapted to each event and give a common set of questions to compare between events.

3. *Identify areas for improvement*

Using post-event surveys and information from departmental townhalls, update departmental DEI events and better tailor them to our community. Create new events to bring an environmental and infrastructure justice perspective to CEE events and DEI learning.

4. *Update efforts to complement College of Engineering offerings*

Only offer at the departmental level workshops that complement CoE ones or that provide a uniquely CEE perspective.

How You Can Help

Contact Bridget Hegarty (hegartyb@umich.edu) to volunteer as a contributing member of this subcommittee.



Creating a More Just Future by Transforming our Curriculum

This pillar aims to integrate environmental and social justice topics into the CEE curriculum, including in required courses, acknowledge and mainstream the legacy of CEE in creating injustices, and identify steps toward a more just future.

Objectives

1. Establish operations of the CEE Learning Community
2. Develop and implement DEI-related curriculum content
3. Host Action Summit on DEI in CEE

What Success Looks Like

- **Establish operations of the CEE Learning Community:** A core group of CEE community members meets regularly to discuss curriculum changes and learn from other University entities (e.g., CEDO, CRLT-E).
- **Develop and implement DEI-related curriculum content:** Incorporate DEI content into at least one course at every level for declared students (2nd, 3rd, 4th year and Grad) in CEE classes for rollout Fall 2021 semester. Offer DEI-focused CEE mini courses in 2022-2023 academic year. Initiate assessment of ABET-like DEI objectives by Winter 2022 semester.
- **Host Action Summit on DEI in CEE:** Host a Summit in Summer 2021 around building inclusive teaching skills & curriculum with at least 20 attendees.

Activity Details

CEE Learning Community

1. Create an open learning community around exploring DEI subjects as they relate to learning.
2. Provide a pathway to be able to successfully implement strategies to address DEI in the CEE community (courses, project teams, research) and future careers
3. Develop tangible ways to implement DEI into the CEE curriculum
4. Assess the impact of different strategies for talking about DEI in an educational context

DEI-Related Curriculum Content

1. Implementation of DEI-related content in specific courses
2. Identify, list and promote justice courses that are offered outside of the department
3. Identify guest lecturers to invite in coming years to support classes implementing content on CEE infrastructure and justice



4. Following up to see how many CEE students enrolled in the DEI-related courses
5. Assess the courses that are being revised/changed to include justice-centered topics
6. Draft an ABET-like objective (expected accomplishments) and criteria (student outcomes) for CEE

Action Summit on DEI in CEE

1. Host a public forum around identified DEI-related curriculum gaps
2. Invite nationally-recognized outside speakers to present and actively participate
3. Create working group activities that will lead to the development of an action report on ways to modify CEE curriculum and training to create a DEI-informed Civil and Environmental Engineer of the future
4. Summit to be held in early Summer 2021

How You Can Help

Contact Jason McCormick (jpmccorm@umich.edu) to volunteer as a contributing member of this subcommittee.



Developing a Healthy and Safe Environment for Mentoring, Sponsorship, & Advocacy

The goal of this pillar is to ensure that all students, postdocs, staff, and faculty have access to constructive mentoring, sponsorship, and advocacy throughout their time in CEE. The initial focus of the mentoring pillar is to provide mentoring options for students, and in subsequent years, design and implement mentoring programs for staff and faculty.

Objectives

1. Collaborate with other department committees to create student mentoring plans
2. Facilitate options for mentoring relationships for students with industry practitioners, faculty, and peers
3. Establish a web-based mentorship portal
4. Assist in nurturing mentoring relationships with department programming

What Success Looks Like

- **Student mentoring plans:** The DEI Committee and Graduate Committee have collaborated to create and deploy a template for a mentoring plan for all CEE PhD students, which is filled out jointly by student and advisor during the student's first year of the CEE PhD program.
- **Mentoring options:** faculty, peers, staff, and engineering practitioners have volunteered to be mentors to CEE students.
- **Mentoring portal:** Mentors and mentees can sign up to volunteer to be a mentor or request mentoring through the mentoring portal on the CEE DEI website. A mentoring handbook is available to every participant and clarifies expectations and responsibilities.
- **Supportive programming:** CEE hosts annual mentoring kick-off meetings to acquaint mentors and students and facilitate mentor matching. CEE also holds occasional coffee hours, film screenings, and other gatherings to support mentor relationships.

Activity Details

Collaborate with other department committees to create student mentoring plans

- Work with the CEE Graduate Committee on drafting PhD student mentoring plans for deployment in AY 2021-2022.



Facilitate mentoring relationships for students with industry practitioners, faculty, and peers

- Gather existing mentorship program info from across UM departments that can be leveraged by CEE students
- Develop relationship with UM organizations with mentoring programs available to CEE students and formalize plan to promote their program to CEE students
- Recruit faculty, industry professionals, postdocs, and students to volunteer as mentors
- Create an intake form for mentor volunteers and individuals seeking mentoring which includes fields for a brief biography, professional role and interests (mentors), academic stage and major/focus (students/postdocs), personal interests (optional), geographic location and preferred meeting format (remote or in-person), and any scheduling constraints.
- Develop and implement a mentor matching process based on professional and personal interests, career stage, availability, etc.

Establish a web-based student mentorship portal within the DEI website

- From CEE DEI website, provide a portal to mentor program options, including:
 - To locate existing University and CoE mentoring programs
 - To volunteer to be a mentor (and submit intake form)
 - To request mentoring and (after approval) review bios, interests, and availability of mentors
- Write mentoring handbook with rights and responsibilities of mentees and mentors
- Collaborate with the Dialogue pillar to promote mentoring opportunities for CEE students via department communications and on social media
- Track Mentorship program engagement by CEE students across all UM department mentoring programs and CEE-led program

Assist in nurturing mentoring relationships

- Host an annual kick-off event
- Host career development panels, seminars, coffee chats, networking events and site/office visits for CEE students/postdocs and mentor volunteers.
- Conduct annual surveys of mentors and mentees to understand participant satisfaction, participation rates and demographics, and areas for improvement

How You Can Help

Contact Katie Crawford (ktcrawf@umich.edu) to volunteer as a contributing member of this subcommittee.



Enabling an Honest and Transparent Dialogue

With this pillar, the DEI Committee aims to transparently communicate DEI information to the broader CEE community, including departmental, college, and university plans, actions, progress reports, and assessment outcomes related to DEI. We will also create a platform for safe and confident reporting, and a clear response and outcomes procedure. We aim to foster an environment where the community feels empowered to engage in dialogue with the committee and department leadership about DEI issues. We value honesty, transparency, authenticity and a growth mindset.

Objectives

1. Experience Reporting
2. DEI on CEE Website
3. DEI Communications Plan
4. Event Communication
5. Annual Report and Progress Feedback

What Success Looks Like

- **Experience Reporting:** Create a safe, transparent and fair process for reporting DEI-related experiences within the department by the end of the Winter 2021 semester
- **DEI on CEE Website:** Regularly update DEI information on the CEE website (ongoing)
- **DEI Communications Plan:** Integrate DEI goals into the current CEE Communications plan by the end of the Winter 2021 semester
- **Event Communication:** Develop a process for sharing DEI event information with the CEE community by summer 2021
- **Annual Report and Progress Feedback:** Release an annual report and solicit feedback on the report once per year

Activity Details per Objective

1. *Experience Reporting*
Create a safe, transparent and fair process for reporting DEI-related actions; this includes reporting of both negative and positive experiences.
2. *DEI on CEE Website*
Create and make ongoing updates to a CEE DEI web page. Perform a full evaluation of the DEI web content on an annual basis.
3. *DEI Communications Plan*
Develop and initiate a CEE DEI communications plan for sharing DEI news, activities, stories, and departmental metrics that leverages current platforms; evaluate the plan on an annual basis.
4. *Event Communication*
Coordinate with the CEE Admin team to make sure DEI events are clearly and



consistently displayed on a department-wide events calendar. Develop language for a Land Acknowledgement to precede events hosted by the DEI Committee. Gather feedback about events using a Google form completed by event attendees. Extend how the committee advertises DEI events.

5. *Annual Report and Progress Feedback*

Create a process for committee record-keeping about completed events and initiatives. On an annual basis, release a report describing what efforts the committee has completed, including quantitative and qualitative assessments of those efforts. Host town halls to allow for community discussion of DEI progress.

How You Can Help

Contact Jessica Petras (jpetras@umich.edu) to volunteer as a contributing member of this subcommittee.



Fostering a Strong, Connected and Successful Community

The implementation of this pillar will help to establish a culture within CEE that is welcoming of every member of the CEE community, exhibits inclusivity at the forefront of CEE values, and fosters a sense of belonging for all students, postdocs, staff, and faculty.

Objectives

1. Demonstrate CEE's commitment to promoting DEI through investment of resources, communication, and hosting events
2. Establish and support an inclusive community in CEE
3. Foster a sense of belonging for every member of CEE

What Success Looks Like

1. **Demonstrate CEE's commitment to DEI:** DEI is a central value of CEE as demonstrated by department resource allocations, communications, and events.
2. **Establish and support an inclusive community in CEE:** A process is established and utilized for the department's acknowledgement and condemnation of local and national incidents of hate.
3. **Foster a sense of belonging for every member of CEE:** Through events and communications, our community members develop empathy for and familiarity with each other.

Activity Details

Demonstrate CEE's commitment to DEI

1. *Hire a DEI specialist whose primary responsibility is managing DEI initiatives within CEE*
2. *Track DEI-related funding opportunities*
Track and post funding grants received by the CEE community on our DEI website to highlight research and education activities in DEI; Track and post funding opportunities from external sources on our DEI website.
3. *Host a 'DEI in CEE'-themed seminar series co-sponsored with the Pelham Scholars Program*
Annual series of DEI-themed invited talks.
4. *Revise the department's bylaws to establish the CEE DEI committee as a standing committee with voting rights for all members*



Establish and support an inclusive community in CEE

1. *Communicate CEE's condemnation of incidents of hate locally and nationally.*
In cooperation with the 'Enabling an Honest and Transparent Dialogue' pillar, create a process and implement departmental responses to local and national incidents of hate in a timely manner. Connect responses to our roles as civil and environmental engineers and as scholars.
2. *Host DEI related community events including roundtable discussions, movie screenings, and casual opportunities to strengthen community ties.*
Track attendance and structure future events around feedback solicited after the events.

Foster a sense of belonging for every member of CEE

1. *Host events that increase understanding of toll of inequities on individuals.*
Hold seminars on imposter syndrome, stereotype threat, and other topics that help CEE members recognize the prevalence of negative personal experiences driven by societal inequities. Increase belonging and reduce isolation by gathering to learn about these experiences.
2. *Create "landing communities" for international and transfer students*
Connect new international and transfer students to groups of international/transfer students who started previously. Connect students using chat/video service and maintain current lists of international and transfer students. Give these students immediate access to a welcoming group with shared experience.
3. *Support CEE's international scholars*
Develop mechanisms, including gatherings for new international students, to enhance experiences of CEE's community of international scholars.
4. *Provide tools to instructors to establish community for students in remote learning (especially for undergrads)*
Assemble descriptions of easily implemented practices to increase connections and community building among students in classes. Most relevant to remote courses, but practices could facilitate student connections in in-person classes as well.

How you can help

Contact Patrick West (phwest@umich.edu) to volunteer as a contributing member of this subcommittee.



Recruiting a Diverse Community

This pillar aims to improve recruiting and admissions practices to enhance the diversity of all members of the CEE community (students, postdocs, staff, and faculty). We define diversity as the practice of representing and supporting people from all backgrounds and identities. We plan to work closely with other pillars to support CEE members through mentoring, skill-building, and fostering an inclusive community.

Objectives

1. Strive for representation of CEE members in all roles that reflect the diversity of race, sexual orientation and gender identity of the greater community that we serve.
2. Build and nurture relationships with Minority-Serving Institutions.
3. Invest in the success of our transfer students by providing opportunities to augment their skills in the fundamentals of math and science, and in research.

What Success Looks Like

- **CEE Recruiting and Admissions Practices:** CEE uses inclusive metrics in recruiting, hiring and admissions, and the department composition has become representative of the greater community. CEE's Pelham Scholars Program, which provides one year of tuition to terminal Master students who have a demonstrated commitment to DEI, is endowed and self-sustaining.
- **Partnerships with Minority-Serving Institutions:** Relationships have been established across U-M and MSI faculty which provide avenues for recruitment, the sharing of research, and collaboration.
- **Supporting Transfer Student Success:** Upon arrival, transfer students are connected with a community of incoming and existing transfer students. Transfer students Metrics of success and self-reported satisfaction among transfer students is increasing.

Activity Details

CEE Recruiting and Admissions Practices

- Evaluate current recruiting and admissions practices for CEE students, staff and faculty.
- Research metrics for hiring and admissions that are more inclusive than current standard practices (e.g., GRE test scores in admissions) and work with other CEE department committees to implement inclusive standards.
- Develop a recruiting and hiring plan to increase diversity in the CEE department.
- Increase transparency of hiring and admissions processes to the broader CEE community.
- Grow the Pelham Scholars Program at the undergraduate and graduate levels.



Partnerships with Minority Serving Institutions

- Develop a strategic plan and acquire resources (e.g., fundraising) for sustained MSI partnerships, which benefits both U-M and the MSI.
- Develop and support MSI partnerships to provide summer research opportunities for MSI undergraduate students and research exchanges for students and faculty at UM and MSI partners.
- Expand participation in the existing 3+2 program with AUCC institutions.
- Highlight the research of MSI faculty and graduate students by inviting them for departmental seminars.

Support Transfer Student Success

- Seek or develop a summer bridge program and/or self-paced course for the benefit of transfer students to bolster their mastery of the fundamentals of math and science.
- Grow and support the participation of CEE faculty in the Summer Research Opportunity ([SROP](#)) and Summer Undergraduate Research ([SURE](#)) programs to expose a diverse pool of students to academic research in CEE.
- Partner with the Mentoring subcommittee to ensure incoming transfer students have access to mentoring programs at the department or College level.
- Together with Fostering Community, connect transfer students through a group chat service to facilitate communication between new students and those who have navigated the transfer process already.
- In conjunction with the Undergraduate Committee, organize mentoring for transfer students by Chi Epsilon.
- Identify and track metrics of the success of transfer students (such as graduation rates, rates of enrollment in graduate programs, etc) and track changes over time.
- Using interviews and surveys, monitor the experience and needs of transfer students.
- Use the metrics of success and experiences of transfer students to identify opportunities to augment CEE programming for transfer students.

How You Can Help

Contact Ann Jeffers (jffrs@umich.edu) to volunteer as a contributing member of this subcommittee.

