The Ira A. Fulton Schools of Engineering (FSE) at Arizona State University (ASU) is committed to cultivating a culture of diversity, equity and inclusion through the implementation of programs and initiatives that support a collaborative and inclusive environment. With this plan for 2020-2022, FSE outlines a set of strategic goals, objectives, and initiatives that build on our current accomplishments and enable further advances in making the school an accessible and welcoming leader in engineering education.

1. DIVERSITY, EQUITY, AND INCLUSION (DEI)

FSE uses the following definitions to frame this plan:

- ***Diversity*** can be defined as membership that represents a range of identities and of identifying features within a group or organization (e.g., a university). Diversity has frequently been discussed with respect to factors such as race, ethnicity, gender, culture, sexual orientation, religion, age, physical abilities, and socioeconomic status. However, diversity can also be considered in terms of ideas and expertise (e.g., academic disciplines and methodologies). In engineering, underrepresented minorities (URMs) often include women, persons with disabilities and three racial and ethnic groups—Blacks, Hispanics, and American Indians or Alaska Natives (as defined by the National Science Foundation).
- ***Equity*** argues that persons should have equal or equivalent opportunities to succeed and thrive regardless of their background or "starting place"—differences in personal or social circumstances should not be allowed to create permanent obstacles. Thus, a more equitable organization is one that (pro)actively works to identify, remove, or mitigate such circumstances and obstacles. Notably, equity is often misunderstood to mean "treat everyone the same." However, equity does not imply equal treatment, but instead demands providing and personalizing resources, without bias, such that everyone has opportunities for equal outcomes.
- ***Inclusion*** can be defined as the extent to which (a) members of an organization are invited to meaningfully participate in the mission, operation, and leadership of that organization, and (b) the contributions of those members are clearly acknowledged and valued. An organization is considered more inclusive when it not only comprises diverse members, but those members (and their ideas, needs, and perspectives) are welcomed and valued.

With this plan, FSE prioritizes DEI as key factors to our collective success in the 21st century.

2. VISION

Our vision is to embed inclusivity as a core tenet of FSE so that all faculty, staff, academic associates, and students achieve their full potential enabled by an environment that is diverse, equitable and inclusive. We aim to achieve global leadership in engineering education, aligned with an access mission, by recognizing diversity and inclusivity as a source of strength to our collective success.

3. OUR NEED

ASU represents students, faculty, and staff from all 50 states, three territories and over 135 countries, many of those enrolled in FSE. We are one of the largest colleges at ASU and one of the largest, most comprehensive engineering colleges in the United States. As of 2019, FSE is serving over 24,000 students. As such, we share the responsibility and vision to embed inclusivity as a core tenet of engineering education and practice, as well as the drive to incorporate it as a guiding principle in how FSE operates on a daily basis. All FSE students, staff, faculty, academic associates, and their colleagues should be supported in achieving their full potential, empowered by an environment that is diverse, inclusive, and equitable. Our responsibility further extends to global leadership. Our aim is to be a leader in inclusive, 21st century engineering education and practice, by recognizing and promoting diversity as a fundamental source of strength essential to our collective success.

4. GOALS & INITIATIVES

FSE prioritizes **three overarching goals** to frame this plan:

1. Create and maintain a student body and workforce across FSE that is diverse in multiple dimensions and inclusive for all.
2. Empower faculty, staff, students, and academic associates at FSE to embrace the core values and practice of diversity, equity and inclusion.
3. Be a global leader in diversity, equity, and inclusion in engineering.

Building on our accomplishments to date, we will continue designing and implementing activities that target the **10 strategic objectives** outlined below. Accomplishing these objectives has the potential for the most immediate and impactful change to our culture.

1. Commit to balancing the diversity of students at all levels to reflect population statistics for female and URMs in Arizona
2. Improve student recruitment, persistence and success of target populations
3. Increase coordination with industry to increase career-readiness of targeted populations and connect committed employers with these populations
4. Foster a culture of inclusion among graduate and undergraduate students and provide an encouraging and supportive environment for all students, faculty, and staff
5. Ensure all undergraduate students acquire the knowledge, experience, and cultural competencies necessary to succeed in a multicultural, globally connected world and contribute to the Fulton culture of inclusion
6. Balance the diversity of faculty and staff hires, at all levels, with those who are committed to thriving in a DEI environment
7. Provide training to students, faculty, and staff to improve DEI awareness
8. Establish metrics for faculty and staff evaluations that assess DEI contributions
9. Recognize and honor participation and accomplishments related to DEI
10. Establish procedures for periodic assessment of diversity and inclusivity and for adjustment of DEI initiatives

Implementation of the strategic objectives dovetail with current FSE- and ASU- efforts (see *Narrative*) and will target students, faculty, and staff. Specific objectives, activities, and metrics aligned with the goals are articulated below.

5. 2020-2022 IMPLEMENTATION PLANS

As part of our 2020-2022 plans, we will update FSE community and lab spaces with a posted statement outlining FSE's vision and commitment to DEI. DII@FSE, the staff and faculty task force focused on enhancing DEI, will work with the Dean to identify and recommend dedicated spaces (e.g. conference rooms, classrooms, study spaces, etc.) that foster inclusivity. We will post a "commitment to DEI" statement in these common spaces and include a written diversity and inclusion statement in written lab, office, and/or classroom expectations.

Programs and activities listed below directly correspond to the strategic objectives outlined above:

Objective 1. Commit to balancing the diversity of students at all levels to reflect population statistics for female and URMs in Arizona

Undergraduate Outreach and Recruitment
● Improve awareness among target populations of high school students about engineering and associated programs as a career choice through FSE's K-12 outreach and recruitment programs and initiatives.
● Increase opportunities for undergraduates to explore engineering as a socially and personally relevant education pathway to facilitate entry into undergraduate engineering.
● Continue to provide high quality pathway experience programs and constant resources to educate prospective students on opportunities available through FSE. Successful current programming includes Earned Admissions, Engineering Projects in Community Service (EPICS) High School and Young Engineers Shape the World (YESW).

- Increase enrollments in K-12 Outreach programs (e.g., EPICS, First Lego League, YESW) with a focus on school districts that serve large numbers of URM students (i.e., Title I Schools).
- Initiate, develop, and nurture productive and quality partnerships with internal and external stakeholders to enhance diversity in engineering. As one example, we will explore establishment of a Minority in Engineering program (MEP) at ASU, building on successful practices of other MEP programs across the nation.
- Ensure that K-12 Outreach programs involve the families of prospective students and consider the importance of family support to overall student success.
- Develop effective yielding programming events for female applicants in partnership with professional and student organizations, such as Society of Women Engineers (SWE), Women in Science and Engineer (WISE), or Women in Computing that incorporate mentoring, lab visits, industry and faculty speakers, and social activities.
- Integrate recruitment activities into 100% of current EPICS and YESW high schools, and Virtual High Schools Visits, through collaboration with K-12 Outreach team.

Graduate Recruitment
- Participate in the Women in Engineering event at ASU hosted by FSE Recruitment.
- Increase participation in and representation at various conferences that focus on URMs (ex: Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), Society of Hispanic Professional Engineers (SHPE), SWE, National Society of Black Engineers (NSBE), etc.).
- Investigate the possibility of providing support through selective fee waivers, substituting the GRE requirement with other indicators that demonstrate performance, or other ways to amplify access for URM's.
- Utilize the GEM fellowship program to increase prospective GEM fellows at FSE and create efficiency in the GEM fellows internal process.
- Offer paid 8-week summer research internships (SURI) for qualified U.S. citizens and permanent residents not currently enrolled at ASU in collaboration with industry and university partners (e.g. Historically Black Colleges and Universities, Minority Serving Institutions, Intel Corporation).
- Develop and offer Experiential Learning Grant Funding to graduate students to support participation in and presentations at conferences, track those who receive funding and publish accomplishments.
- Offer the SUMMER AT ASU program to partner schools to develop more partnerships, encourage faculty-to-faculty interactions, and create strong pipelines of students, especially females and URM students.
- Work collaboratively with all program chairs to evaluate and revise the award selection and notification process to remove barriers for URMs and females.
- Create a more equitable distribution of the awards across all schools and programs.

Objective 2. Improve student persistence and success of target populations
- Identify, institutionalize, and scale effective, evidence-based mechanisms that increase entry and persistence in engineering by working with different social institutions through an inclusive large network of actors.
- Implement a comprehensive learner record system to aid academic advisors in guiding students as they in navigating their involvement in extra and co-curricular activities offered within FSE.
- Foster academic success of students through creating learning communities that provide peer tutoring support in key subject areas including mathematics, physics, chemistry, and select engineering courses.
- Advance knowledge of engineers and engineering workplaces through courses and workshops that offer access to industry mentors and site visits.
- Develop students' engineering identity through "future possible self" activities.
- Encourage and facilitate affiliation with a professional engineering society or FSE student organizations.
- Develop strong faculty mentoring and student peer mentoring initiatives.
- Increase diversity in participation at E2, a three-day immersive experience for first-year engineering students, among first generation students to support identity development with the engineering community, create a sense of camaraderie among students, and facilitate the practice of teamwork skills and a culture of teamwork.

● Incorporate learning activities into the E2 curriculum promote DEI.

Objective 3. Increase coordination with industry to improve career-readiness of targeted populations and connect committed employers with these populations
● Create awareness about the ASU Diversity Pledge that enjoins corporations with Fulton's ASEE diversity pledge.
● Work with industry partners to expand industry-led engineering skills and knowledge workshop opportunities for targeted populations.
● Consult with industry partners on their recruitment plans to ensure consideration for diverse qualified students and help them customize engagements to maximize exposure to targeted audiences.
● Work with industry partners to connect their representatives with student organizations and to develop deeper and sustainable relationships that can help deliver diversity events, networking sessions, etiquette dinners, information sessions, and technical talks suited for target audiences.
● Advise and mentor industry representative roles within student organizations to implement best practices and help improve existing industry engagements.

Objective 4. Foster a culture of inclusion among graduate and undergraduate students and provide an encouraging and supportive environment for all students, faculty and staff
● Establish a college-level access point for information about available resources to address DEI issues.
● Develop/modify websites and other media to improve ease of navigation and comprehensiveness of information that highlights resources, support services, and accomplishments.
● Provide undergraduates with DEI training.
● Identify opportunities to incorporate topics of diversity into existing courses (e.g. as related to ABET accreditation criteria).
● Regularly evaluate communication and media to ensure publications represent an inclusive culture and include messaging from the Dean regarding vision for DEI.
● Create opportunities for constituencies to gather together to exchange ideas, appreciation, and spirit of community.
● Implement mechanisms to make mentoring and counseling resources accessible to everyone.
● Develop a funding plan to ensure ample financial support for DEI initiatives and support services.
● Leverage the efforts of FSE student organizations focusing on improving diversity and inclusion in engineering and incentivize all Fulton student organizations to incorporate inclusivity measures into their strategic plans.
● Include quick links on engineering and department web pages to social networks that offer support services to underrepresented groups.

Objective 5. Ensure all undergraduate students acquire the knowledge, experience, and cultural competencies necessary to succeed in a multicultural, globally connected world and contribute to the Fulton culture of inclusion
● Provide opportunities and incentives for students to participate in training such as Sun Devil Civility, a student-led, staff supported initiative that provides students, faculty and staff with the tools to build an inclusive campus culture rooted in civil dialogue and action.
● Disseminate and promote events and activities designed to foster a diverse and inclusive campus culture offered through the EOSS and other campus partners.
● Create opportunities for increased numbers of engineering students to develop intercultural competencies through participation in study abroad experiences as well as connecting to opportunities through FSE's emerging global school initiatives such as TEDI-London.
● Increase participation in curricular and co-curricular programs such as Grand Challenges Scholars program, EPICS, and Entrepreneurship + Innovation, which promote competencies such as empathy, self-awareness, multi-disciplinarity through personal engagement, understanding different cultures through multicultural experiences, and finding engineering solutions that serve people and society reflecting social consciousness.

Objective 6. Balance the diversity of faculty and staff hires, at all levels, with those who are committed to thriving in a DEI environment

- Require an "Inclusion and Equity Statement" from faculty applicants, similar to "Research Statements" and "Teaching Statements."
- Ask applicants to articulate the ways in which they will promote inclusive and equity cultures in their classrooms and labs, and how these values will shape their research, teaching, and/or service as faculty in FSE and ASU.
- Request staff position applicants to provide a diversity statement and explain their commitment to diversity and inclusion as it pertains to the job for which they are applying.
- Require staff hiring committees to reference this document during the interview process, giving the potential employee an opportunity to discuss how they would demonstrate their commitment in daily operations.
- Evaluate implementing an "Inclusion Resource Officer" role within FSE. This individual would complete additional training, have knowledge of FSE and campus resources, be responsible for acting as a first point of contact to report any issues or reports of noncompliance, and develop a process for handling these concerns.

Objective 7. Provide training to students, faculty, and staff to improve DEI awareness
- Schedule a variety of training opportunities for relevant/key topics. Select training courses will be required for faculty serving in particular roles. For example, members of committees that evaluate others (e.g., Promotion & Tenure), establish policies (e.g., curriculum committees), work in various labs (e.g. accessibility and accommodations for persons with disabilities) can be required to participate in training on bias and inclusivity.
- Require microaggressions and implicit bias training for all new faculty and staff; to include contextualized scenarios where parties interact, as is common in the workplace and to acknowledge interdependence of all groups.
- Refresh and update training material every two years as FSE culture and environment shifts in alignment with this Diversity Plan.
- Establish recertification requirements for faculty and staff to take a refresher course every two years.

Objective 8. Establish metrics for faculty and staff evaluations that assess DEI contributions
- Include section in faculty evaluations that acknowledges and encourages participation in (a) DEI training/workshops and (b) events (e.g., a film screen and discussion about relevant social issues). Tone of evaluations should be positive and encouraging (i.e., reward participation) rather than negative and critical (i.e., punishing lack of participation).
- Create a formal program that recognizes and incentivizes voluntary participation in existing DEI workshops and events. Recognition could occur at multiple levels such as awarding units with high participation additional discretionary funds to support DEI initiatives.
- Add an assessment component for demonstration of DEI into the annual staff evaluation tool.
- Recommend DEI be included as a component of scheduled quarterly conversations between supervisors and staff.
- Offer additional training opportunities for personnel with a demonstrated need to improve. Training would differ from the biannual training, instead focusing on contextualization of diversity and inclusion as integrated into daily routine and relevant to staff functions.

Objective 9. Recognize and honor participation and accomplishments related to DEI
- Create seed funding for incorporating DEI principles, problems, and goals into research projects. Many engineering endeavors strive for immediate connection to human needs and goals or "downstream" applications to human efforts. Seed funding could encourage researchers to think about these human connections in addition to the core "engineering problem."
- Create seed funding for entrepreneurial activities that seek to extend/disseminate the benefits of engineering innovations to under-served or under-resourced populations.
- Provide training that helps researchers articulate "broader impacts" that incorporate social good/justice (i.e., how will the research contribute to a more equitable world?).
- Recognize staff members who contribute to an inclusive and supportive culture for diversity.
- Create a separate and prestigious award for DEI to honor those who vanguard FSE's commitment to embed these values into the framework of FSE. Similar to other annual awards, monetized incentives will be attached to the recognition.

- Public recognition of the recipients at the annual awards program.

Objective 10. Establish procedures for periodic assessment of diversity and inclusivity and for adjustment of DEI initiatives
- Implement a data management plan.
- Capture and track metrics as outlined in Section 8.
- Implement an Inclusion Resource Officer role within FSE, as described in objective 6.

6. SCHOOL-WIDE COMMITMENTS

In the spring of 2019, FSE established the Diversity and Inclusion Initiative at FSE Task Force (DII@FSE), which brings together representatives from faculty and staff across each of the six schools and Dean's Office. DII@FSE meets regularly and is central to the efforts of formulating and codifying the faculty- and staff-facing DEI efforts (current and proposed), as outlined in this plan. The task force conducted a benchmarking study of internal resources and activities as well as external programs and best practices. The task force combined with FSE Academic and Student Affairs (ASA) and FSE leadership to develop this plan.

An important strategy for FSE is to not recreate initiatives that are already offered across ASU, and as such, we will continue to leverage established campus-wide resources such as:

- [Office of Diversity, Equity, and Inclusion](#) (ODEI)
- [Educational Outreach and Student Services](#) (EOSS)
- [Disability Resource Center](#) (DRC)
- [Office of Inclusion and Community Engagement](#) (within the Provost's Office)
- [Committee for Campus Inclusion](#) (CCI)
- Enhanced university-wide benefits and policies: ASU is continually revising and refining university policies to best serve all members of our communities. Striving to be an employer of choice, ASU understands the importance of work-life balance and wants to support the development of every employee in all aspects of their lives: at work, at home and in the community. Recent policy enhancements as of July 2019 include: Increase paid parental leave benefit from six to 12 weeks for parents (including birth mothers, fathers, and adoptive parents); adoption and fertility subsidies; paid time off for volunteer service; and an emergency child and elder care program. FSE commits to supporting faculty and staff in the use of these benefits.

Implicit Bias and Inclusion Training

ODEI focuses on university employees and regularly hosts training regarding topics such as sexual harassment, accommodations for persons with disabilities, service animals, diversity in the workplace, microaggressions, and implicit bias. For faculty, FSE required the 2019-2020 college-level Promotion and Tenure committee members to attend a workshop on microaggressions and implicit bias. Building on this pilot implementation we will explore how to integrate similar and ongoing trainings within the personnel committees throughout the six FSE schools. Staff may enroll in training on microaggressions and implicit bias delivered by ODEI periodically or upon unit request, but training is not mandatory. FSE plans to develop student-facing programming that covers implicit bias.

We understand, however, that this is not enough. FSE plans to enhance training opportunities to include workshops on relevant/key topics for faculty serving in particular roles. For example, members of committees that evaluate others (e.g., Promotion & Tenure), establish policies (e.g., curriculum committees), work in various labs (e.g. accessibility and accommodations for persons with disabilities) would benefit by participation in training on bias and inclusivity. We propose requiring microaggressions and implicit bias training for all new faculty and staff; to include contextualized scenarios where parties interact, as is common in the workplace and to acknowledge interdependence of all groups. We propose refreshing training every two years as FSE culture and environment shifts in alignment with this Diversity Plan. As such, staff would be required to recertify their training every two years.

7. ACCOUNTABILITY

The Dean of the college and the Vice Dean of Strategic Advancement will oversee the implementation of this plan. They will be supported by the ASA and the DII@FSE Task Force for implementation and monitoring of initiatives outlined in this plan. As we strive towards the objectives outlined herein, we will also implement a strategy for equitable implementation of DEI initiatives across students, faculty and staff.

8. METRICS & ASSESSMENT

We plan to implement a data management plan with an evaluation component for periodic assessment of our efforts towards enhanced diversity and inclusivity as part of our strategic goals (see objective 8 and 10). By capturing and tracking metrics on the measures outlined below, ASA and the DII@FSE Task Force will be able to make recommendations to the Dean as improvements are needed. Progress will be tracked using the following metrics. *Numbers in parentheses correspond to strategic objectives outlined in Section 5.*

- Climate survey data and follow up results: online surveys, exit surveys, event feedback, training feedback, etc. (1, 2, 3, 6, 7)
- Clarification of short-term and medium-term outcomes for engineering pathway programs (1, 2, 3, 4, 5)
- Improvement in the collection of demographic data across pathway and student-facing programs (1, 2, 4, 5, 7)
- Development of systems and strategies for tracking students along engineering pathways from high school and community college to ASU FSE
- Number of hiring committees convened with enhanced DEI focus (6)
- Number (or percentage) of faculty and staff hires that enhance diversity (6)
- Number of evaluation committees convened with enhanced DEI focus (6)
- Number (or percentage) of invited seminar speakers that are URM or female (1, 5, 7, 9)
- Calendar of DEI events conducted or promoted throughout the year - speakers, workshops, recognition and awards (4, 5, 7)
- Training courses offered (7)
- Awards issued or recognized (9)
- Number of DEI concerns reported (6, 10)