

# San Diego State University

## College of Engineering



## Diversity Equity and Inclusion Committee

5-years Strategic Planning Document  
(Fall 2020 – Fall 2025)

*“If the ladder of educational opportunity rises high at the doors of some youth and scarcely rises at the doors of others, while at the same time formal education is made a prerequisite to occupational and social advance, then education may become the means, not of eliminating race and class distinctions but of deepening and solidifying them”*

*-Harry S. Truman*

*(Commission on Higher Education Report, 1947)*

## **Information on the College Diversity Equity Inclusion Committee**

- 1. Unit Name:** College of Engineering
- 2. Primary Contact Name:** Dr. Mahasweta Sarkar
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### **4. Planning Committee Members:**

1. Dr. Mahasweta Sarkar (ECE), Chair
2. Dr. Thais Alves (CCEE)
3. Dr. Joaquin Camacho (ME)
4. Dr. Gustaaf Jacobs (Aerospace)
5. Dr. Parisa Kaveh (Lecturer)
6. Theresa Garcia (Assistant Dean)
7. Michelle Bunn (Staff)
8. Sheridan (Student)
9. Maricruz Carrillo (Student)

The above committee members have pledged to actively participate in the College DEI Committee. A copy of their signed pledge has been filed with the University DDI Council.

In addition, the Diversity and Inclusion Statement that has been developed and approved as part of the planning process and has been posted on the College's website in Fall 2019.

## **5. College of Engineering's Diversity and Inclusion Statement**

The SDSU College of Engineering is committed to creating a safe, equitable, inclusive working and learning environment, which promotes mutual respect for each and every member of the College, thereby facilitating each member to thrive to their optimal potential.

Diversity of thought is crucial to the advancement of all disciplines in engineering. The success of the college is greatly enhanced by cultural, ethnic and racial diversity because it creates synergy and cultivates role models and transformative ideas that accelerate the impact of the College on society.

The College strives to promote and sustain a healthy climate by providing the platform for necessary dialogue amongst students, faculty and staff so that each individual in the College feels welcomed, supported, valued and respected. The College strives to recruit and retain faculty staff and students, being inclusive on all basis, including but not limited to characteristics such as ability, age, color, educational background, ethnicity, family structure and experiences, gender, gender identities, language, national origin, political preferences, race, religion, sexual orientation, socioeconomic status and veteran status.

The College is committed to uplifting the merit, potential, talent and creativity of each of its members allowing a respectful space for everyone to thrive and contribute to society.

## 6. Environmental Assessment of the College of Engineering

### ***Representation:***

Table 1 shows the College’s trend in increasing diversity in several areas including enrollment, retention, graduation rates and faculty recruitment. We have been especially successful in attracting female students in Engineering both in the undergraduate and the graduate programs. We are a Hispanic Serving Institution and our numbers reflect that a large population of our students belong to that underrepresented group. We aspire to increase our African American and Native American student population in the next five years. We have actively and consciously made strategic efforts to increase women representation in our faculty. We will embrace well-planned hiring strategies as outlined in section 8 to increase the number of our female faculty members in our College.

Student retention and graduation rates have shown an increase over the last three years (Table 1). We strive to see even higher rates of success. To that effect, with funding from the SDSU Provost in 2018-2019 we have created the Center for Student Success in Engineering and created a Lead Faculty Advisor position. The Lead Faculty Advisor has been working to analyze existing data to understand roadblocks to our student’s success both in terms of graduation rates and retention. We expect to see higher rates of graduation and retention in the next three years. However, we will work to diversify not just our faculty’s gender pool but also our faculty’s ethnic pool to represent our student population better. Finally, the College of Engineering will diversify its advisory board to include representatives from underrepresented communities, most notably female and Hispanics. Table 1 below showcases data for our College from 2015-2018. For each category, the data are separated by a “/”. A “%” sign denotes data reported as a percentage of the total:

*Table 1: Report of Baseline Metrics form 2015-2018*

<b><u>Baseline metrics</u></b>	<b><u>Total</u></b>	<b><u>Women</u></b>	<b><u>African American</u></b>	<b><u>Hispanics</u></b>	<b><u>Native American</u></b>
<b>T/TT Faculty</b>	55/54/59	7/6/7	3/3/3	4/4/4	0/0/0
<b>Lecturers</b>	62/61/70	7/7/12	1/1/1	9/10/12	0/0/0
<b>UG Student Enrollment</b>	3420/3717/3956	15.7/17.8/18 (%)	2.8/2.8/2.8 (%)	25.5/27.3/26.1 (%)	0.3/0.1/0.2 (%)
<b>Masters student enrollment</b>	436/364/292	28.7/25.5/27 (%)	0.7/0.5/1 (%)	8.5/9.3/14.7 (%)	0/0.3/0.3 (%)
<b>Doctoral student enrollment</b>	21/26/32	33.3/36.4/44 (%)	0/0/3.3 (%)	5/6/14 (%)	0/0/0 (%)
<b>Non-teaching academic staff</b>	20/21/22	11/11/12	1/1/1	2/2/2	0/0/0
<b>Administrators</b>	7/8/8	2/2/2	1/1/1	1/1/1	0/0/0
<b>Advisory Boards(s)</b>	22/22/18	0/0/0	0/0/0	2/2/1	0/0/0

## ***Climate:***

In 2019, the University conducted a survey to assess the climate of the College of Engineering. Among other questions, the survey asked the faculty and staff, how valued they felt in their work environment and if given a choice, would they work for SDSU. For both questions, more than 50% faculty and staff agreed to the statements. However, faculty and staff who has joined the College between 1-5 years, were even more agreeable to those statements - 70% of them feels valued in the College, whereas 90% of faculty and staff who has joined the College within the past 2 years feels valued in their work environment. This analysis indicates that the College has been moving in the right direction in creating the climate of value, inclusion and worthiness which in turn promotes growth and success among its faculty and staff.

Therefore, with the strategies suggested in this plan, we aim to further increase the “feeling-valued” index of our staff and faculty by 15% by year 2025. In terms of perception of commitment to diversity, less than 20% of all respondents disagreed that the College is welcoming, supporting and respectful of employees of diverse backgrounds. Although there is room for improvement, the CoE climate is positive and potentially receptive to working towards our Smart Goals. The basis of the College’s Smart Goals has been the feedback received from its faculty and staff through this climate survey. Therefore it is important to showcase some of the relevant facts from the survey. Table 2 presents an analytical breakdown (in percentages) of the responses of the College’s faculty and staff to some of the most pertinent questions in the survey, to analyzing the climate of the College of Engineering.

The table shows that 29% of the College’s faculty and staff feels that their presence is valued in the College though only 19% of the employees feel that their perspective is valued. On the other hand, about 30% of the employees feel that the College is not only respectful towards its employees of diverse backgrounds, but also creates a welcoming and supportive environment for its employees from different ethnic groups.

*Table 2: Selected Results from the Climate for Diversity Planning Survey*

Questions	Strong Disagree (%)	Disagree (%)	Somewhat Disagree (%)	Somewhat Agree (%)	Agree (%)	Strongly Agree (%)
my presence is valued	3.64	7.27	1.82	23.64	34.55	<b>29.09</b>
my expertise is valued	5.36	5.36	3.57	23.21	37.50	<b>25.00</b>
my contributions are valued	5.36	5.36	3.57	17.86	39.29	<b>28.57</b>
my perspective is valued	10.71	5.36	7.14	21.43	35.71	<b>19.64</b>
welcoming for employees of diverse backgrounds	3.64	7.27	5.45	20.00	36.36	<b>27.27</b>
collaborative for employees of diverse backgrounds	5.45	7.27	7.27	21.82	29.09	<b>29.09</b>
supportive for employees of diverse backgrounds	5.45	7.27	3.64	27.27	27.27	<b>29.09</b>
respectful for employees of diverse backgrounds	5.45	5.45	1.82	23.64	32.73	<b>30.91</b>

**Success:**

**Student success:** We not only evaluated our faculty success but also our student success since we wanted to focus on student success as one of our SMART goals. We analyzed data on our college’s student retention and graduation rates from years 2015-2018 (Table 3). In the next 5-years to strive to engage higher number of students, especially in our graduate program. We specifically want to engage with our students from underrepresented minority (URM) groups namely women, Latinx, Native Americans and African American communities. Based on the data presented in Table 3, we formulated our SMART goal #2 and propose plausible strategies in Section 8 to realize the goal.

*Table 3: College of Engineering Student Success Report (2015-2018)*

Categories	Total	Women	African American	Latinx	Native American
UG Student Enrollment	3420/3717/3956	15.7/17.8/18 (%)	2.8/2.8/2.8 (%)	25.5/27.3/26.1 (%)	0.3/0.1/0.2 (%)
UG 6-year graduation rates	58.9/60.1/63.7	72.8/75.3/79.4	40.7/41.3/42.7 (%)	44.6/45.3/52.3 (%)	0/0/0 (%)
Bachelor’s degree recipients	493/512/675	70/84/111	11/12/10	122/142/169	0/2/1
Masters student enrollment	436/364/292	28.7/25.5/27 (%)	0.7/0.5/1 (%)	8.5/9.3/14.7 (%)	0/0.3/0.3 (%)
Master’s degree recipients	126/167/140	37/44/38	1/2/1	12/14/12	0/0/0
Doctoral student enrollment	21/26/32	33.3/36.4/44 (%)	0/0/3.3 (%)	5/6/14 (%)	0/0/0 (%)
Doctoral degree recipients	5/9/8	2/2/2	0/0/0	1/1/1	0/0/0

**Faculty Success:** In terms of faculty success, the College has witnessed an average time of 4.4 years to receiving tenure in the past 20 years’ timeframe, whereas average time to promotion to Full Professor (after receiving tenure) has increased from an average of 5.3 years in the past 10 years to a 5.6 years in past 5 years. This is consistent with the enhanced research expectations at the university level. Over the past fifteen years, there have been sixty new hires and 34 separations (22 retirements, 7 resignations, 5 terminations). This trend is consistent with the national average and is well-known to be related to general retirement of the baby boom generation. Out of the sixty new hires in the last fifteen years, fourteen have been female hires with majority in the department of Civil Engineering (Table 4). Two of the female hires resigned.

*Table 4: Total Female Faculty Hires in each Department between 2005-2020*

Total Hires	Aerospace	Civil	Electrical/Computer	Mechanical
60	1	7	2	3

## **7. College of Engineering’s Three SMART Goals**

The College Diversity Equity Inclusion (DEI) committee identified three guiding top-level SMART (Specific Measurable Attainable Relevant Timely) goals to provide opportunity, advancement and a nurturing climate for ALL faculty, staff and students in the College of Engineering (CoE).

**Goal #1:** Improve gender and ethnic diversity in faculty to reflect diversity in student population (*Women faculty in 2019: 12.5% to Women faculty in 2025: 18%*)

**Goal #2:** Leverage the HSI status of the San Diego State University campus to create a pathway for students from Under Represented Minority (URM) backgrounds to enter graduate programs (*2025: Women- 32%, Latinex 22%, African American 1.5%, Native American 0.5*)

**Goal #3:** Strengthen and sustain a climate to promote and nurture the growth and inclusion of students, faculty, and staff of the College of Engineering (*2019: 50% members feeling “valued”; 2025: 75% feeling “valued”*)

## **8. Planned Strategies and Interventions**

As explained in Section 7, the College DEI committee identified three guiding top-level SMART (Specific Measurable Attainable Relevant Timely) goals to provide opportunity, advancement and a nurturing climate for ALL faculty, staff and students in the College.

### **Rationale behind selecting the three particular goals:**

The University’s Division of Diversity and Inclusion (DDI) Council led by Dr. Jennifer Imazeki conducted a college specific survey in November 2019. Thirty-three tenured and tenure-track faculty (out of 65), seven lecturers (out of 60), three administrators, eighteen staff members (out of 39) and **two others** in the College of Engineering participated in the survey, for a total of 63 participants. The survey polled the participants for the following information:

- (i) gender, ethnic and religious identities
- (ii) professional designation
- (iii) years of service to the College
- (iv) extent of feeling “valued” in terms of presence, skills, contributions and perspective
- (v) extent to which the work environment is welcoming, collaborative, respectful and supportive to individuals from diverse background
- (vi) extent to which the College is committed to hire, retain, nurture and propel initiatives for individuals from diverse backgrounds
- (vii) if given a choice, the desire to return/continue working for the College
- (viii) individual comments

The data from the above survey was analyzed with emphasis on participant’s personal identities and professional attributes. The results from the analysis and most importantly, the personal comments of individual participants were closely studied by the College DEI Committee. The areas and issues that deserved the most attention became obvious from the analysis of the survey data. The committee selected the top three issues that an overwhelming majority of our College employees want to be ameliorated. These three issues formed the basis of the three SMART diversity goals of our College. The College DEI Committee also reflected on and analyzed the College demographic data from the past 5 years (since 2015) to further validate the need to embark on the three diversity goals for the next 5 years (2020-2025).



## **GOAL #1**

### **Improve gender and ethnic diversity in faculty to reflect diversity in student population**

**Goal Area:** Faculty hiring and representation

**Objective:** Increase the percentage of female faculty from the current 12.8% to 18% of the College's total tenure track faculty pool by 2025. Some departments may choose to increase their faculty from URM backgrounds.

#### **Rationale behind the goal number of 18%:**

It is worth noting that the NSF national data shows 23.6% of Engineering doctoral degrees were awarded to women in 2018-2019 [1] and that in Fall 2018, the country had 17.4% female tenured and tenure-track faculty members [2]. Moreover, the goal number of 18% was also set keeping in mind the current female faculty representation in the College along with the new faculty lines that the College hopes to secure in the next 5 years.

In fall 2018, 18% of our undergraduate students, 27% of our Masters students and 44% of our Doctoral students were females. By attaining the 18% women faculty mark by 2025, we will approximately be at par with our undergraduate female student population.

#### **General Strategies That Departments in the College can adopt to increase female faculty hiring:**

All departments in the College, with the exception of Civil, Construction and Environmental Engineering, lacks noticeably in female representation among their tenured and tenure track faculty members. Departments are encouraged to use some or all of the following set of general strategies in improving the female-male faculty ratio. The College DEI Committee also notes that the "goal" number of female faculty members that each department aspires to achieve by 2025 will vary depending on the current female faculty representation in the department, as well as the number of doctoral degrees conferred to females in that particular discipline. The general strategies are as follows:

- Use the [Building on Inclusive Excellence criteria](#) for all faculty searches
- Require all search committees to complete [training](#) on implicit bias and microaggression
- Require all search committees to have an Inclusion Ambassador
- Certification of applicant pools based on representation proportional to available representation of underrepresented populations
- Submit all job advertisements for review for inclusive language to the Division of Diversity and Innovation
- Have all search committee members complete the Inclusion Ambassador Training
- Build networks with faculty and staff from minority-serving institutions
- Require a diversity statement from applicants
- Advertise jobs in outlets that are readily accessible to diverse audiences to ensure applicant pool proportionality
- Ask candidates about their demonstrated commitment to diversity
- Hire a recruiter to assist in reaching out to underrepresented populations
- Attend conferences within the discipline that have a focus on diversity
- Identify and network with post-doctoral students from other institutions

- Direct outreach to fellowships (e.g., Ford Foundation, CSU Chancellor’s Office Incentive Program, UC Postdoctoral fellowship program)

Four of the above strategies are outlined in details below. A subset or all of these strategies may be implemented in each faculty search conducted in the College of Engineering from 2020-2025:

### **Strategy 1: Use Building on Inclusive Excellence (BIE) Criteria**

*(This criterion is now enforced by the University Senate)*

The College of Engineering will employ the University’s BIE [12] committee to certify that finalists meet at least two of the eight BIE criteria. This should occur prior to finalists being approved for a campus visit. This committee also wants to emphasize that **the (BIE) criteria do not require the candidate to identify as part of an underrepresented population. Instead the criteria are designed to assess the candidate’s demonstrated or desired commitment to serving and/or addressing issues related to underrepresented populations.**

- **Resources needed:** The BIE [3,12] committee is organized by the Associate Chief Diversity Officer. The College will be using resources that are already established and implemented by the University.
- **Responsibility:** The Chair of the search committee will be responsible for including the BIE criteria in the job advertisement. The search committee Chair will also be responsible for submitting candidate materials to the Dean’s Office and the Associate Chief Diversity Officer (ACDO) for review by the BIE committee as soon as finalists are selected. After the determination is made by the BIE committee, the Dean, the DEI Committee Chair and the search committee chair will be notified by the ACDO.
- **Assessment:** The College DEI Committee will submit an annual report to the Dean and the University’s DDI Council, detailing implementation of this strategy for each faculty search that was conducted in the College.

### **Strategy 2: Inclusion Representatives in Search Committees**

Faculty search committees in the College of Engineering will consider inviting certified Inclusion Representatives (provided by DDI Council) who can advise the search committee on DEI matters pertaining to the applicant and the search procedure when required/requested

- **Resources needed:** This program is funded by the Chief Diversity Officer.
- **Responsibility:** The search committee chair will recruit an approved Inclusion Representative through the listing provided by the Associate Chief Diversity Officer and inform DEI Committee of the same.
- **Assessment:** The CoE DEI Committee will submit an annual report to the Dean and the University DDI Council detailing the implementation of this strategy.

### **Strategy 3: Implicit Bias Training**

The College of Engineering will only approve search committee members who have participated in one of the University’s Equity-Minded Hiring seminars within the last five years.

- **Resources needed:** This program is funded by the Chief Diversity Officer. Committee members will need to invest two-three hours to complete the basic training.
- **Responsibility:** The search committee chair is responsible for confirming that all members have participated in the training prior to beginning review of applications.
- **Assessment:** The College DEI Committee will submit an annual report to the Dean and the University DDI Council detailing the implementation of this strategy.

#### Strategy 4: Improve Pool Proportionality

In cases where pool proportionality is not reflective of terminal degree holders within the field, the College of Engineering DEI committee recommends that the search committee specifies actions that have been taken to ensure a representative pool. Documentation of these actions will be provided to the ACDO. [The Hiring Guide already requires departments to submit a pool proportionality form to the Office of Employee Relations and Compliance (OERC)]

- **Resources needed:** Committee chairs may need training to interpret the data and understand appropriate actions to increase pool proportionality. Some plausible actions are outlined in the “general strategies” section of this document
- **Responsibility:** The search committee chair is responsible for submitting the pool proportionality form, and any required documentation, to OERC, ACDO and the College DEI Committee.
- **Assessment:** The College DEI Committee will submit an annual report to the Dean and the University DDI Council detailing the implementation of this strategy.

**GOAL #2**  
Create pathways for students from URM backgrounds to enter our graduate programs

**Goal Area:** Leverage the Hispanic Serving Institute (HSI) status of SDSU to increase the number of Under Represented Minority (URM) students in our graduate programs. ASEE [4] classifies women, Latinx, African American and Native American groups as URM. We list the current (and recent past) representation of our URM students in our graduate (Masters) programs, along with our target numbers for each community.

64,602 Master’s degree in Engineering were awarded in 2016-2017, out of which 16,561 were awarded to females [5]. The national average percentages in the table below are calculated in regards to that total number [5].

*Table 5: URM data for College of engineering, National Averages and Target Goals*

URM Groups	CoE, SDSU 2016-2017	CoE, SDSU 2017-2018	CoE, SDSU 2018-2019	National Average 2016-2017 [5]	2024-2025
Women	25.5%	27%	29.5%	26.4%	32%
Latinx	9.3%	14.7%	19%	3.4%	22%
African American	0.5%	1%	0%	1.9%	1.5%
Native American	0.3%	0.3%	0.3%	0.11%	0.5%

**Objective:** In our College, we strive for a proportional representation of our student body among our faculty primarily in terms of gender and ethnicity. However, it is also upon us, to create a pool of highly qualified and competent URM professionals who can form a diverse pool of competent applicants in the job market. Our second diversity goal aims to cater to that need. In the table above, we have listed the current demographics of our Master’s student body, the national averages for each URM group and our target graduate student (Masters program) enrollment for each URM group.

**Rationale behind the target numbers:**

The target numbers for each URM group has been carefully formulated, keeping in mind the trend of enrollment in our graduate programs by each of the URM groups. We have taken into account the national averages of each of the groups. As is evident, we are far ahead of the national average in graduate enrollment of women, Latinx and Native American groups. After conversations with our Associate Dean in Graduate Studies, feedback from the SDSU’s Native American liaison, and conversations with African American students in the National Society of Black Engineers (NSBE) and above all, keeping in mind the overall growth prediction of our graduate program, we narrowed upon the ambitious yet realistic goal of achieving 32% women, 22% Latinx, 1.5% African American and 0.5% Native American of graduate students in our engineering graduate programs by 2025.

**General Strategies that Departments in CoE can adopt to increase URM graduate students:**

- Build networks with minority serving institutions
- Develop a recruitment video featuring diverse alumni

- Clearly identify commitment to diversity and inclusion on website (e.g., course, research opportunities, service learning)
- Develop plans to directly recruit SDSU undergraduates into graduate programs
- Develop an ambassador program for diverse graduate students and advanced undergraduates
- Departmental representation at events celebrating diversity and inclusion, such as the Martin Luther King Luncheon and Caesar Chavez Luncheon
- Attend a graduation ceremony honoring diverse student populations, such as the Black Baccalaureate Celebration, Lavender Graduation Ceremony, Raices Unidas Family Graduation Ceremony, Andres Bonifacio Samahan Filipino Graduation Ceremony, or American Indian Graduation Celebration
- Serve as a faculty advisor to a student club serving URM
- Recognize and incentivize faculty who adopt inclusive teaching strategies into their courses
- Develop service-learning opportunities based in diverse communities

The DEI Committee outlines five strategies below that will be implemented in the College of Engineering from 2020-2025 to increase graduate student representation in the four URM groups:

### **Strategy 1: Create the pipeline**

We will create a pipeline of local high schools with a high attendance from URM groups, community colleges and our own undergraduate students, by creating awareness and knowledge about our graduate program. We specifically want to undertake several or all of the following actions:

(i) disseminate information to students on:

- a. what graduate studies entail and what a graduate program is all about
- b. the financial, academic and career-long benefits of a graduate degree
- c. specific scholarships/resources available to attend graduate school
- d. University Seminar courses for Freshman and Transfer students – use this already existing platform

to disseminate information about graduate programs. Graduate students and Professors speak at this forum which can be a powerful means of exposing and motivating students to consider an engineering graduate program.

(ii) build self-efficacy in pursuing a graduate degree in engineering by:

- a. exposing students to research through summer research programs,
- b. providing role models through women and URM faculty and graduate student guest speakers

- **Resources Needed:** In order to build a culture of K-12 and undergraduate research in the College, we will need to motivate our faculty to mentor such students in their research labs especially over the summer months. The College will need to organize information sessions in educating faculty in several grant opportunities for undergraduate summer research especially with URM groups. The University and the College already has organizations dedicated to serve each of the URM groups. CoE DEI committee will work with these groups/programs, namely (i) Women in Engineering (WE), (ii) Pre-College Institute, (iii) MESA Program (College Prep and/or University), (iv) Maximizing Access to Research Careers (MARC) and (v) Initiative for Maximizing Student Development (IMSD) (vi) National Society for Black Engineers (NSBE), (vii) Society of Hispanic Professional Engineers (SHPE), (viii) Native American Tribal Liaison and (ix) Women and Inter-Cultural Relations Centers.

- **Responsibility:** The Leads of each of the seven organizations mentioned above and a designated committee member from the College DEI Committee will be appointed to work with each organization.
- **Assessment:** An annual report will be presented to the Dean and to the University DDI Council outlining the year-long outreach activities that will be organized by the DEI Committee.

### **Strategy 2: Enhance Women Enrollment and Retention in Graduate Programs**

Establish mechanisms to enhance women enrollment and retention in graduate programs. The Women in Engineering (WE) is an organization in the CoE that actively engages in such activities. The College DEI committee has a representative from WE. Some of the specific activities that WE will engage in, are:

**WE-Chat:** two times each semester, WE will organize a student information session, for our undergraduate, graduate and local high school students (in collaboration with MESA and PCI programs) with invited faculty (female faculty and others too) who can share information about their lab, research, research opportunities and/or funding opportunities to educate students on research and summer research opportunities available. Existing female graduate students and those from URM groups will also be invited to speak at this forum to share their experience in academia and beyond. WE-Chat will also serve as a platform for informal discussions between female engineering students and faculty about surviving and thriving in an engineering career, thereby providing the much needed female role models for our students.

- **Resources Needed:** WE would require a nominal fund to host the We-Chat and WE-coffee along with space and organizational overheads in terms of work-hours.
- **Responsibility:** The Director of the WE organization will lead this strategy in collaboration with MESA and PCI programs
- **Assessment:** Director of WE will provide a written report to DEI Committee every semester. WE will also keep an account of the number of under-graduate and local high school students who received and opportunity to participate in summer research programs in SDSU engineering labs and of the students who join engineering undergraduate and graduate programs. The Committee will share this report with the Dean's office and the DDI Council.

### **Strategy 3: Increase Native American Student Population**

In order to increase the Native American student population in the College of Engineering, the DEI Committee will work with the Native American tribal liaison. The DEI Committee has collaborated with the liaison and formulated the following plan:

- (i) **Building a relationship with local reservations:** arranging trips to the local reservations(at least one/semester) to win their trust and confidence which will enable them to send their children to SDSU. Through this relationship we can learn from each other in order to connect the field of engineering to the Native American culture.
- (ii) **Advertising the program to indigenous students:** we will implement two methods to accomplish this goal. (a) organized visits to local high school, community colleges and existing undergraduates at SDSU from this ethnicity and (b) Hosting a “College Day” specifically dedicated to Native American high school and undergraduate students which will comprise of both “listening” to what hinders engineering education among the Native American students and “speaking” about labs, research and the opportunities that engineering education can bring to a student.
- (iii) **Participate in SDSU Native American Student Alliance:** CoE students and faculty will lead workshops and serve on panels to showcase Engineering and motivate the Native American youth to embrace engineering careers in the Annual Youth Empowerment Conference held in SDSU.

- **Resources Needed:** University has already made resources available to the Tribal Liaison to conduct similar programs as suggested above.
- **Responsibility:** Tribal Liaison and the DEI Committee, namely Professors and graduate students in the committee to volunteer their time during “College Day”
- **Assessment:** The Tribal Liaison will report to the DEI committee of the number of participants in the “College Day” program. The Committee would follow up with interested students during the end of Spring semester to motivate their interest in applying to undergraduate and graduate engineering programs at SDSU. These effort and numbers will be documented and shared with the Dean’s office and DDI Council annually.

#### **Strategy 4: Increase African American Student Population**

In order to increase the African American student population in the College of Engineering and increase the pipeline of African American graduate students, the Diversity and Inclusion Committee will work with the Harambee program, NSBE, MESA and the Center for Inter-cultural Relations to promote awareness of Engineering education amongst these communities. Active campaigns of visiting high schools in neighborhoods with higher concentration of students from the African American ethnic groups will be conducted. In addition, DEI Committee will work with the College of Engineering Student Council (CESC) to help promote these activities. Specific activities include:

- (i) **Attending NSBE general body meeting** at least once every semester to showcase the engineering program and engaging in a dialogue with the African American students about their concerns, queries, dilemmas and myths about an engineering graduate program
  - (ii) **NSBE Outreach** goes into the community to expose young students to math, science, and engineering. The DEI will participate in these activities to reinforce college and STEM pursuits.
  - (iii) **MESA Day Competition** invites several hundreds of local middle and high school students to SDSU for STEM project competitions. During the day, students will be exposed to SDSU cultural societies and resources such as the NSBE and SHPE as well as the Pride Center, Women and Inter-Cultural Relations Centers, etc. MESA Day is also an ideal platform to engage high school students in engineering lab visits and/or interactions with Latinx/African American graduate students.
- **Resources Needed:** MESA, NSBE and the CESC are equipped to carry this strategy forward. If additional funding is required, it will be brought to the attention of the Dean of the CoE.
  - **Responsibility:** Assistant Dean of Undergraduate Affairs, Director of MESA and Chair/President of NSBE.
  - **Assessment:** The semester long effort will be documented by the MESA Director. CoE DEI committee will track African American student enrollment and will report the data to the Dean’s office and the DDI Council.

#### **Strategy 5: Increase Latinx Student Population**

In order to increase the Latinx student population in the College of Engineering and increase the pipeline of Latinx graduate students, the DEI committee will work with MESA, SHPE and the Center for Inter-cultural Relations to promote awareness of Engineering education amongst these communities. Active participation in activities and working with the CESC will help promote graduate school opportunities. Specific activities include:

- (i) **Attending SHPE general body meeting** at least once every semester to showcase the engineering program and engaging in a dialogue with the Latinx students about their concerns, queries, dilemmas and myths about an engineering graduate program
  - (ii) **SHPE HS conference:** DEI will use this platform to engage with Latinx students. Professors from Latinx ethnic groups will address student queries about SDSU's engineering graduate programs in this conference.
  - (iii) **MESA Day Competition** invites several hundreds of local middle and high school students to SDSU for STEM project competitions. During the day, students will be exposed to SDSU cultural societies and resources such as the NSBE and SHPE as well as the Pride Center, Women and Inter-Cultural Relations Centers, etc. MESA Day is also an ideal platform to engage high school students in engineering lab visits and/or interactions with Latinx/African American graduate students.
- **Resources Needed:** SHPE, MESA and the CESC are equipped to execute these outreach activities. If additional funding is required, it will be brought to the attention of the Dean of the CoE.
  - **Responsibility:** Assistant Dean of Undergraduate Affairs, Director of MESA program, President of SHPE.
  - **Assessment:** The semester long effort will be documented by the MESA Director. CoE DEI committee will track Latinx student enrollment and will report the data to the Dean's office and the DDI Council.



### **GOAL #3**

**Strengthen and sustain a climate to promote and nurture the growth and inclusion of faculty and staff**

**Goal Area:** Climate

**Objective:** To increase satisfaction of faculty and staff by 15%, by 2025 (as measured by responses to survey item about feeling valued (in terms of presence, expertise, contribution and perspective) and “Given a choice, I’ll still come to this university”).

**Rationale behind the goal number of 15%:**

The survey conducted by the University asked the faculty and staff in the CoE, how valued they felt in their work environment and if given a choice, would they work for SDSU. For both questions, more than 50% faculty and staff agreed to the statements. Moreover, for faculty and staff who has joined the College between 1-5 years, were even more agreeable to those statements. 70% of newly hired personnel (faculty and staff) felt valued in the College. This tells us that the College has been moving in the right direction in creating the climate of value, inclusion and worthiness which in turn promotes growth and success among its faculty and staff. Therefore, with the strategies suggested in this plan, we are hoping that we can increase the “feeling-valued” index of our staff and faculty further by 15% by year 2025.

**General Strategies That Departments in the College can adopt to create a more inclusive climate:**

Departments are encouraged to use some or all of the following set of general strategies in improving the climate of the department, especially in creating a climate of feeling valued and appreciated. The College DEI Committee also notes that the “goal” number that each department tries to achieve by 2025 will vary depending on the current climate of the department. The departments can use their own metric to gauge the current climate of the department and adopt appropriate strategies to raise its bar.

The general strategies are as follows:

- Have a departmental representative on the College Diversity Committee
- Participate in professional learning on diversity and inclusion
- Recognize and incentivize faculty and staff accomplishments
- Recognize and incentivize faculty and staff who serve as advisors (formally or informally) for diverse organizations and students
- Recognize and incentivize faculty who participate in trainings on inclusive pedagogy and scholarship
- Recognize and incentivize faculty and staff who goes beyond the call of duty
- Develop a mentoring plan for all faculty and staff
- Review department policies to ensure equitable distribution of service loads
- Review salaries and policies to ensure equitable compensation and advancement
- Include the effort to promote collegiality and inclusiveness as an evaluation criteria of the Department Chair’s performance

The College of Engineering (CoE) DEI Committee will outline three strategies that can be embraced by the departments and the College from 2020-2025 to promote and sustain a climate of appreciation and acknowledgement:

#### **Strategy 1: Establish the College Diversity Committee**

The College of Engineering will establish a standing committee on Diversity, Equity and Inclusion, with representation from all departments, faculty, staff and students. This group will meet regularly to discuss progress on the goals and interventions established in this Plan.

- **Resources needed:** Committee members will need time to attend meetings and complete associated tasks assigned to them by the Committee.
- **Responsibility:** The Dean of the College of Engineering will designate a Chair to convene the Committee. The Chair of the Committee will serve as the College’s liaison to the University’s DDI Council. The Chair will establish a regular schedule of meetings and coordinate the work of the Committee. The main task of this Committee will be to ensure commitment and accountability from departments and individuals in moving the DEI goals forward.
- **Assessment:** The DEI Committee will submit an annual report to the Dean detailing Committee activities and progress on implementation of the strategies outlined in the document.

### Strategy 2: Faculty and Staff Recognition

CoE faculty and staff have voiced their desire to be recognized and celebrated in terms of their year of service, accolades, accomplishments and leadership skills. To that effect, the DEI Committee has outlined several means below. The purpose of these activities is to increase the sense of “value” that each member of the College feels, particularly in terms of their service to the College. Each Department Chair and the Dean will be accountable for leading at least two such activities per academic year. The College DEI Committee, if required, will help by sharing ideas with each department Chair, the department DEI Committee and the Dean to design the activities suitable for their respective department/College for each academic year. Some suggestions are below:

- (i) Potluck dinner hosted by the Chair, maybe at his residence (or a faculty/staff member’s residence) to commemorate the successful close of an academic year. Deserving faculty and staff can be recognized at this dinner and their achievements (grants, leadership, teaching excellence) celebrated with a token of appreciation.
- (ii) A ritual of celebrating promotions/specific years of service to the department or College, through a lunch, or dinner or at least a coffee hour at maybe the EIS courtyard
- (iii) Celebrating staff contributions and accomplishments and nominating them for such recognition

- **Resources needed:** Department Chairs and Dean will need time and funds to plan and execute these activities.
- **Responsibility:** The DEI Committee will work with each department level DEI-committee and the Dean to document the activities they intend to plan for each academic year.
- **Assessment:** The Chair of the DEI Committee will submit an annual report to the Dean detailing Committee activities and progress on implementation of the activities by each department.

### Strategy 3: Strengthening Collegiality and Inclusivity

CoE faculty and staff have voiced their desire to bring back the community aspect of service at the workplace. Each Department Chair and the Dean will be accountable for leading at least two such activities each academic year. The College DEI Committee, if required, will help by sharing ideas with each department Chair, the department DEI Committee and the Dean to design the activities suitable for their respective department/College for each academic year. Some suggestions are below:

- (i) Potluck dinner hosted by the Chair, maybe at his residence (or a faculty/staff member’s residence) to commemorate the successful close of an academic year.
- (ii) Tea/Coffee times with graduate students, post doctorates, researchers, faculty members facilitating informal mingling and exchanging of ideas and accomplishments
- (iii) Promoting collegiality and camaraderie through activities like SDSU Engineering Nights with Padres, end-of-semester barbeque with faculty, staff and students in EIS courtyard

- **Resources needed:** Department Chairs and Dean will need time and funds to plan and execute these activities.

- **Responsibility:** The DEI Committee will work with each department level DEI-committee and the Dean to document the activities they intend to plan for a particular academic year.
- **Assessment:** The Chair of the DEI Committee will submit an annual report to the Dean detailing Committee activities and progress on implementation of the activities by each department.

*Note: Strategies 2 and 3 may be implemented at the College level with individual contributions from each department. For example: an end-of-semester BBQ gathering at the EIS courtyard may be arranged by the Dean's office where each department throws an individual "food stall"*

***Note: The Senate DEI Recommended four Strategies and Interventions on faculty hiring have been explicitly addressed in Goal 1 under Section 8 of this document***

## **9. Accountability**

Section 8 of this document outlines specific responsibilities and accountability for each of the goals. In addition, progress will be monitored annually and will be submitted to the Dean's office with a copy to the University DDI Council.

The main task in Fall 2020 will be integrating the College DEI goals to that of the four departments in the College and helping the departments draft their respective DEI plans. Starting Spring of 2021, the College and the departments will implement specific strategies mentioned in this document to execute each of the SMART goals. Progress will be monitored and documented by the CoE DEI Committee. At the beginning of each academic year, the departments and the College DEI committees will commit to the task items that each department and College will undertake to achieve the SMART goals. A "checklist" and accountability/commitment form will be handed out to each department DEI Chair at the beginning of each academic year starting Fall 2021. Each department will deliberate over their commitment to moving the College DEI goals and document them in the form. The College DEI committee will retain a copy of that form for accountability purposes. These units will be accountable for the tasks they would have committed to for the particular academic year. At the end of the academic year, each department DEI committee will outline their accomplishments for the year. The template of the "checklist" for both the beginning and end of the academic year is provided in the appendix section of this document. Each department DEI committee will report back to the College DEI committee about their annual DEI activities through this form. These will be incorporated in the College's DEI Annual Report that will be due at the end of each academic year to the Dean's office and the University DDI Council.

## **10. College of Engineering's Process of Finalizing the DEI Strategic Plan**

The College of Engineering has taken every effort to include the voices of many faculty, staff and students in the College to finalize the three SMART goals. As outlined in Section 8, the survey conducted by the University and a detailed analysis of the survey results provided by the University DDI Council, served as the basis of the selection of the SMART goals. In addition, the survey had a section for personal comments. This was particularly helpful in learning about the opinions and needs from various personnel in the College. Besides the survey results, the DEI committee independently also looked at college climate data as presented in Tables 1 and 2 in this document. The Institutions organized by the University DDI Council were valuable in understanding how to piece all the information on the trends in the College's climate and the facts and figures on faculty and student diversity, success and equity in formulating the College's SMART goals.

The College's Diversity statement was first drafted by the committee and then circulated in the entire College, to all its faculty and staff. Feedback was collected for a period of three weeks. All of the suggestions were incorporated into the final version of the statement. It was then presented to faculty at large in the College's all-hands meeting in October 2019.

The SMART goals were similarly drafted by the committee. The three SMART goals were presented to faculty and staff at large in the College's meeting in December 2019. The committee worked on the goals throughout Spring 2020, suggesting various strategies to implement the goals and coordinating meetings with supporting student bodies on campus who could potentially partner with the College to realize the goals. The document was then circulated to the Dean's office and the College's executive committee which comprises the department Chairs and the Assistant and Associate Deans of the College. The Chair of the College DEI committee – Dr. Mahasweta Sarkar - presented the SMART goals to the executive committee in May 2020. Dr. Sarkar held individual meetings with the department Chairs and Associate and Assistant Deans to go over the SMART goals and the implementation strategies and incorporated their feedback and opinion in the document. It was decided by the executive committee that an "executive summary" of the SMART goals should be drafted and circulated among all faculty and staff in the College of Engineering. Dr. Sarkar drafted the executive summary and shared it with the Dean's office and the executive committee for circulation in June 2020. In August 2020, at the College's retreat to commemorate the beginning of Fall 20-21 academic year, on behalf of the CoE DEI committee, Dr. Sarkar presented the SMART goals to the entire College faculty and staff. Questions and concerns about the document from participating faculty and staff were addressed at this retreat, following which the executive committee approved the Strategic Plan to be submitted to the University DDI Council in September 2020.

## **Appendix:**

### **DEI Department Committee Commitment Checklist**

*(to be submitted at the beginning of the academic year)*

Academic Year: \_\_\_\_\_ Department: \_\_\_\_\_

#### **SMART Goal #1: Improve gender diversity in faculty to reflect diversity in student population**

- Strategies that you want to specifically implement:
  - \_\_\_\_ Use Building on Inclusive Excellence (BIE) Criteria
  - \_\_\_\_ Require Inclusion Representatives
  - \_\_\_\_ Require implicit bias training
  - \_\_\_\_ Improve pool proportionality
- Other strategies you want to implement beyond the four strategies listed above:
- Examples and statistics that you will use to demonstrate you've accomplished the items you marked above for SMART Goal #1:
- Any other plans/comments regarding implementing SMART Goal #1:

#### **SMART Goal #2: Create pathways for students from URM backgrounds to graduate programs**

- Strategies that you want to specifically implement:
  - \_\_\_\_ Create the pipeline
  - \_\_\_\_ Enhance Women Enrollment and Retention in Graduate Programs
  - \_\_\_\_ Increase Native American Student Population
  - \_\_\_\_ Increase African American Student Population
  - \_\_\_\_ Increase Latinx Student Population
- Other strategies you want to implement beyond the strategies listed above:
- Examples and statistics that you will use to demonstrate you've accomplished the items you marked above for SMART Goal #2:
- Any other plans/comments regarding implementing SMART Goal #2:

#### **SMART Goal #3: Climate to promote and nurture the growth and inclusion of faculty and staff**

- Strategies that you want to specifically implement:
  - \_\_\_\_ Establish the College Diversity Committee
  - \_\_\_\_ Faculty and Staff Recognition
- Other strategies you want to implement beyond the strategies listed above:
- Examples and statistics that you will use to demonstrate you've accomplished the items you marked above for SMART Goal #3:
- Any other plans/comments regarding implementing SMART Goal #3:

#### **Department Specific DEI Activities:**

Department specific activities that you will engage in to move the DEI goals of your department forward, especially in:

- Equity Gaps in Student Success:
- Equity Minded Teaching Practices:
- Any other Comments/Plans:

## DEI Department Committee Annual Report Checklist

Academic Year: \_\_\_\_\_ Department: \_\_\_\_\_

### **SMART Goal #1: Improve gender diversity in faculty to reflect diversity in student population**

- Strategies that you want implemented:
  - \_\_\_\_ Use Building on Inclusive Excellence (BIE) Criteria
  - \_\_\_\_ Require Inclusion Representatives
  - \_\_\_\_ Require implicit bias training
  - \_\_\_\_ Improve pool proportionality
- Other strategies (if any) you implemented beyond the four strategies listed above:
- Examples and statistics to demonstrate what you've accomplished for SMART Goal #1:
- Any other progress that you made regarding implementing SMART Goal #1:

### **SMART Goal #2: Pathways for students from URM backgrounds to enter graduate programs**

- Strategies that you implemented:
  - \_\_\_\_ Create the pipeline
  - \_\_\_\_ Enhance Women Enrollment and Retention in Graduate Programs
  - \_\_\_\_ Increase Native American Student Population
  - \_\_\_\_ Increase African American Student Population
  - \_\_\_\_ Increase Latinx Student Population
- Other strategies you implemented beyond the strategies listed above:
- Examples and statistics to demonstrate what you've accomplished for SMART Goal #2:
- Any other progress that you want to report regarding implementing SMART Goal #2:

### **SMART Goal #3: Climate to promote and nurture the growth and inclusion of faculty and staff**

- Strategies you specifically implemented:
  - \_\_\_\_ Establish the College Diversity Committee
  - \_\_\_\_ Faculty and Staff Recognition
- Other strategies (if any) that you implemented beyond the strategies listed above:
- Examples and statistics to demonstrate what you've accomplished for SMART Goal #3:
- Any other updates or progress that you want to report regarding implementing SMART Goal #3:

### **Department Specific DEI Activities:**

Department specific activities that you have engaged in to move the DEI goals of your department forward, especially in:

- Equity Gaps in Student Success:
- Equity Minded Teaching Practices:
- Any other progress/accomplishments:

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