Miami
65% Hispanic/Latinx
18% Black/African-American

Miami-Dade County Public Schools
5th largest public school district in the US
71% Hispanic/Latinx
20% Black/African-American

FIU (R1 Public / Community Engaged)
58,787 students (33% Pell)
64% Hispanic/Latinx
12% Black/African-American
57% Women (36% Latinas, 7% Black)

Engineering and Computing
7,113 students (36% Pell)
60% Hispanic/Latinx
9% Black/African-American
20% Women (11% Latinas, 2% Black)
Demographics for the Academic Year 2019-2020

<table>
<thead>
<tr>
<th>Total Number of Students</th>
<th>Females</th>
<th>Males</th>
<th>Undergraduates</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>176</td>
<td>225</td>
<td>331</td>
<td>70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latino</td>
<td>58.8%</td>
</tr>
<tr>
<td>Non-resident Alien</td>
<td>17.2%</td>
</tr>
<tr>
<td>White</td>
<td>8.2%</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>7.2%</td>
</tr>
<tr>
<td>Asian</td>
<td>5.5%</td>
</tr>
<tr>
<td>Two+ Ethnicities</td>
<td>3%</td>
</tr>
</tbody>
</table>

Biomedical Engineering
35% Pell
59% Hispanic/Latinx
7% Black/African-American
44% Women (24% Latinas, 3.5% Black)

#1 for bachelor’s degrees awarded to Hispanics

#6 in bachelor’s degrees awarded to African Americans
Engineering Deans Council (2015-2016)

ASEE – Letter of Commitment (January 2017)

1. **Develop a Diversity Plan for engineering programs**: articulate the definition and the vision of diversity and inclusiveness for the institution; assess its need or justification; provide a statement of priorities and goals; commit to equity, implicit bias and inclusion training across the school; define accountability; and the means of assessing the plan through various means including surveys.

2. **Commit to at least one K-12 or community college pipeline activity** with explicit targeted goals and measures of accountability aimed at increasing the diversity and inclusiveness of the engineering student body in our institution.

3. **Commit to developing strong partnerships between research-intensive engineering schools and non PhD granting engineering schools serving populations underrepresented in engineering.**

4. **Commit to the development and implementation of proactive strategies to increase the representation of women and underrepresented minorities in our faculty.**
Gender-by-ethnic biases; microclimates
Evidence-based intervention programs
University-wide diversity, equity & inclusion

increase, retain and promote more women and underrepresented minority faculty at FIU.

Kenneth G. Faraco, Ph.D.
AVP Provost, Executive Vice President, Chief Operating Officer, Professor

Ammara Khan, Ph.D.
Associate Provost, Office to Advance Women, Equity & Diversity, Professor

Heim Dafler, Ph.D.
Assistant Provost, STEM, Dean of Students, Professor

Michael Hoffmeister, Ph.D.
Dean, College of Arts, Sciences & Education, Professor of Biology

Kaye Jung, Ph.D.
Professor and Chair, Dia. Health & Gender Equity Scholars
STRIDE - Strategies and Tactics for Recruitment to Increase Diversity and Excellence
Hiring/Faculty Recruitment Workshop (Search committee members)
Diversity Advocate Workshop (Designated faculty on search committee)
Tenure & Promotion Workshop (College committee, Chairs, Deans)
Hiring leaders workshop (Dean & Above)

Bystander Leadership - from “insight” to “action” - address gender and race bias within faculty interactions.

Notice the event
Interpret the Problem
Lead by assuming responsibility
Decide how to respond
Act

AWED Theater
interactive, educational theater program addressing multicultural intersectional identities characteristic of FIU, Hispanic-serving institutions, and the region as a whole
FIU hosts ‘I Can’t Breathe: Racial Unrest in America in the Wake of George Floyd’s Death’

‘Just Mercy’ explores racial bias, inequality in U.S. criminal justice system

Black lives matter: Voices of the community
Diversity and Inclusion Plans

**Strategy**

Academic Affairs, Colleges, and departments will create diversity and inclusion action plans. Plans should be **feasible, specific, and achievable**. Deans (and Chairs and faculty liaisons) will be **accountable** for meeting planned goals.

**Key Goals to Achieve**

1. To **increase the representation** of faculty from historically underrepresented groups (URGs), such as women in STEM, African-American and Hispanic-American faculty in all fields.
2. To provide an **equitable and supportive institutional climate** for underrepresented groups (i.e., women, racial/ethnic minorities, LGBTQ+ people, and persons with disabilities) at the faculty and graduate and undergraduate student levels.
3. To ensure a **welcoming environment** for all faculty, students, and staff.
# BME Diversity and Inclusion Plan

<table>
<thead>
<tr>
<th>Item#</th>
<th>ACTION ITEMS</th>
<th>Person responsible</th>
<th>Goals and Metrics</th>
<th>AWED feedback 2018-2019</th>
<th>2019-2020 Actual Outcomes, return to AWED by June 30, 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>STRIDE best practices attendance requirement for faculty search members (once every 3 years)</td>
<td>Faculty</td>
<td>All BME faculty members of search committees complete STRIDE training (offered by AWED). In 5 years, all BME faculty members should complete the STRIDE training workshop.</td>
<td>Based on what AWED sent you for 2018-2019 to report in Column E, 3 faculty met the STRIDE requirement in 2018-2019 to serve on search committees.</td>
<td>No BME Faculty search. Completed 2019: Sharan Ramaswamy</td>
</tr>
<tr>
<td>6</td>
<td>Diversity Advocate (DA) training for one member of each search committee (once every 3 years)</td>
<td>Chair</td>
<td>Diversity Advocates will complete the Diversity Advocates training offered by AWED.</td>
<td>James Schummers completed the DA training.</td>
<td>No BME Faculty Search.</td>
</tr>
<tr>
<td>7</td>
<td>NSF Bystander Leadership Program participation.</td>
<td></td>
<td>All BME faculty should complete the Bystander Leadership training by 2023 (offered by AWED).</td>
<td>Congratulations! Seven BME faculty have completed Bystander.</td>
<td>Refresher: Jung</td>
</tr>
</tbody>
</table>

*Faculty*
### Graduate Students

**REU – Diversity Training**

**Equity vs. Equality**
(by race, class, gender, etc.) within research/STEM opportunities.

<table>
<thead>
<tr>
<th>Item#</th>
<th>ACTION ITEMS</th>
<th>Person responsible</th>
<th>Goals and Metrics</th>
</tr>
</thead>
</table>
| 36    | Develop diversity plan to recruit diverse students | Graduate Committee; Marketing Staff | (1) Evaluate the gender and racial/ethnic diversity of graduate students  
(2) Require faculty who are funded to attend national URM-focused meetings (see above) to provide targeted recruitment efforts at these meetings. |
| 37    | Establish diversity awards and recognition for graduate students | # and date of award | |
| 38    | Develop plan to improve social climate, e.g., establish mentoring and networking opportunities | Graduate Committee | (1) Annual discussion with graduate students about diversity & Inclusion  
(2) Departmental financial support for women, URM, and LGBTQ+ graduate student networking events |
| 38-1  | Mentoring graduate students | (1) Require all doctoral graduate students to develop a diversity plan statement as part of their proposal exam  
(2) Launch a “Women of BME” program that supports mentorship of female graduate students |
### Departmental Climate

#### BME Conversations

2020 – “Black Lives Matter”

<table>
<thead>
<tr>
<th>Item#</th>
<th>ACTION ITEMS</th>
<th>Person responsible</th>
<th>Goals and Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>47-1</td>
<td>Take steps to improve the department’s climate</td>
<td>Chair</td>
<td>(1) Revise (add) the departmental mission statement to include language regarding diversity, equity &amp; inclusion for faculty, students and staff.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2) Annual discussion with the faculty and staff about climate.</td>
</tr>
<tr>
<td>49</td>
<td>Colloquium Series - Diversity (specific commitment, e.g., diversity speaker or topic twice per academic year)</td>
<td>Chair</td>
<td>(3) Require all faculty to provide an annual diversity statement.</td>
</tr>
<tr>
<td>51</td>
<td>Initial review and schedule of review of departmental web and print matter and news stories for D&amp;I content</td>
<td>Chair</td>
<td>Include at least four women and URM speakers in the WH Coulter seminar series per year.</td>
</tr>
<tr>
<td>52</td>
<td>Continuing review of public face of department</td>
<td>Chair</td>
<td>Evaluate all media publications and the BME web site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Publish at least 4 “stories” on BME web page about accomplishments of women and URM faculty/staff/students.</td>
</tr>
</tbody>
</table>
The Women of CEC is an initiative launched by the college to increase the number of women pursuing STEM careers, particularly in engineering. Although women hold nearly half of all jobs in the U.S. economy, they hold less than 25 percent of STEM jobs. The Women of CEC initiative consists of:

- Kick-off Lunches: Held in the fall and spring to demonstrate to new students that the college is fully invested in their success.
- FCA Women in Engineering Forum: Held in the fall for this corporate partner to meet and recruit female students.
- JP Morgan Chase Women in Engineering Forum: A spring event that includes a panel discussion with four female executives and students.

Breaking Barriers: A monthly online feature highlighting women engineers, computer scientists and construction professionals paving the way for women in the field.

WOMEN in Advising

The Engineering Advising Center is committed to helping future engineers, including female students, succeed. The staff is made up of 71 advisors, 12 of whom are women. Meet one of them.

Carmen Schwack

As a d4l, Carmen was always doing things that didn’t work, and even taking them apart so she could put them back together again. She excelled at math and science, so a career in mechanical engineering made sense, but it would take her years to reach her goal. Growing up in Caracas, Venezuela, she worked full-time through high school to help out her single mom with the family’s bills. Any money left over, she’d save for college. When she graduated from high school, she went to England to learn English while attending school as a study abroad student. She then came to the U.S. and spent some time on the West Coast, where she attended a community college and UC Berkeley for pre-engineering before coming to Miami to be closer to her mom, whom she had left in Venezuela.

Carmen graduated from FIU with both her bachelor’s and master’s degree in mechanical engineering. Undeterred, it took her many years, but at age 29, this first-gen student finally achieved her dream. Shortly after graduation, she was offered a job at CEI. In Advising, with the opportunity to teach — a role she’d had for close to 24 years. As a senior instructor and advisor, Carmen teaches Introduction to Engineering, and advises students on their class schedules and career paths. She also encourages students struggling and the one who want to give up, emphasizing the importance of education. Carmen has been married for 21 years. She and her husband have one son who’s following in her footsteps. He’s graduated from FIU and is now pursuing mechanical/aerospace engineering at University of Florida, and he has already completed an internship at NASA.

Breaking Barriers

Laura Miscon Gómez is a biomedical engineering research scientist. With a background in engineering, neuroscience and psychology, she mentors several undergraduate and graduate students. She is also the research coordinator for a DAIRH, supported by a 5-year human trial for a novel neural implant device to restore sensation to upper limb amputees. She works with all the regulatory aspects of the project, ensuring compliance, and obtaining approvals from the Institutional Review Board. Since enrolling volunteers have enrolled in the study. In the future, Laura will conduct several more scientific studies on the restoration of sensory perception.
Our K-12 Story: Comprehensive Program at Scale

- Awareness & Engagement
- Competency & Knowledge Dissemination
- Early College Education
Engagement & Awareness

• Engineering Expo
• Engineers on Wheels

Competency and Knowledge Dissemination

• Miami Prep (Since 1996)
• ENLACE (Engaging Latino Communities for Education, since 2000)
• Summer Transportation Camp (since 2015)
• Summer Research Experience (FIU-wide)
• After School Programs
• Math AP Tutoring (The Algebra Project)
College Credit & Teacher Training

Dual Enrollment
- Cohort-based
- On-campus
- 20-30 students per semester

Teacher Training
- Interactive Virtual Training for Early Career Teachers in High Poverty Schools – Dept. of Education (Lisetti)
- Cyber-Enabled Technologies – NSF (Pissinou)
- Paths-Up- ERC (health of underserved populations) - NSF (Ramella-Roman)
At-Scale Laboratory for Implementing and Evaluating Strategies to Propel Students from Populations Underrepresented in STEM

- Meet a need in the community: Engage and Enhance Awareness
- Enhance K-12 in-reach/outreach: Build Competency through Knowledge Dissemination
- Improve Education: Infuse College Curriculum into High Schools; Educate Teachers

Engaging, Educating and Empowering the next wave of engineers and computer scientists
Thank You

Ranu Jung
rjung@fiu.edu

https://advance.fiu.edu/programs/bystander-leadership/index.html