

Preparing for ABET Changes regarding DEI: Results of the Big Ten++ DEI Summit

Dr. Sarah E Zappe, Pennsylvania State University

Dr. Sarah Zappe is Director of the Leonhard Center for the Enhancement of Engineering Education and Assistant Dean of Teaching and Learning at Penn State. She holds a doctoral degree in educational psychology emphasizing applied measurement.

Dr. Stephanie Cutler, Pennsylvania State University

Dr. Stephanie Cutler has degrees in Mechanical Engineering, Industrial and Systems Engineering, and a PhD in Engineering Education from Virginia Tech. She is an Associate Research Professor and the Director of Assessment and Instructional Support in the Leonhard Center at Penn State.



Preparing for ABET Changes regarding DEI: Results of the Big Ten++ DEI Summit

Leonhard Center for the Enhancement of Engineering Education

Sarah Zappe

Stephanie Cutler

Ivan Esparragoza

**Diversity, Equity,
and Inclusion
Summit**

A Big Ten ++ Engineering
Workshop





I N C L U S I O N

This presentation
has three goals.

1. Provide an overview of the Summit
2. Provide attendees with access to the activities that they can potentially utilize at their own institutions
3. Provide information on the future direction of the Big Ten++ DEI Summit



In 2021, the Engineering Deans of the Big Ten+ requested that ABET incorporate DEI principles into the General Criteria for Accrediting Engineering Programs.

ABET responded by including draft statements relating to DEI in the criteria for faculty and the curriculum, which were open to public comment in 2022.

March 31, 2021

To:

Dianne Chong, ABET President
 David Kelly, ABET Past President
 Ann Kenimer, ABET Coordination Working Group Chair
 Michael K.J. Milligan, ABET Executive Director, CEO
 William J. Wepfer, ABET President-Elect
 Mary Leigh Wolfe, ABET Inclusion, Diversity and Equity Advisory Council (IDEAC) Chair

Dear Colleagues:

We thank you for the role that ABET has continued to play in expanding the quality and excellence of the engineering programs across the country and the world. As per the ABET mission and approach, the standards you set and the quality that you aspire to guarantee imbues confidence in those who aim to build a better world now and tomorrow.

A critical element of building a better world is our collective efforts to ensure that we prepare our students to be the leaders of tomorrow. We believe that diversity, equity, and inclusion (DEI) are core values for all engineers, and are essential considerations for generating creative and effective solutions to the most important challenges facing our society and our planet. By creating a culture within our engineering programs where diversity, equity and inclusion are considered to be a prerequisite to excellence and impact, our students will be prepared to develop technological solutions to society's most pressing problems and to combat prejudices, racism, and discrimination during their careers.

We need to embrace the importance of a respectful, diverse and inclusive community in our respective institutions of higher education and across the engineering discipline. These values are critical to live and learn by and should be ubiquitous across the fabric of our educational enterprises. Noting that values become permanent if the incentives and reward structures are also aligned for us to have the desired end impact, we believe that these values need to be adopted, shared, and practiced by our institutions, our faculty and staff, our curricula and our students.

It is also important to note that many engineering students do not interact with other diverse groups of students until they attend college and begin their undergraduate studies. Such opportunities to personally experience and learn from and about other diverse perspectives are often limited during high school. So the undergraduate curricula becomes the ideal venue to inform students about DEI concepts and the importance of listening and learning about diverse opinions, perspectives and point of views.

Finally, we would like to point out the potential synergies between DEI and ethical/professional responsibilities. The manner in which the concepts of ethics and professional responsibilities are integrated in our curricula under ABET criteria can serve as inspiration for how DEI concepts could be integrated in our curricula under future criteria.

Hence, as Big10+ Universities Deans of Engineering, we are strongly supportive of incorporating Equity, and Inclusion in the General Criteria for Accrediting Engineering Programs. We are aware that we are working towards the approval of definitions for *Diversity, Equity, and Inclusion* as defined by the ABET Board of Directors, and modifications of Criteria to include learning objectives and assessments for diversity and inclusion across *Students, Curriculum, Faculty, and Institutional Support*. Please use this letter as cog of our support for ABET's leadership in this important endeavor and let us know how we can engage to further our collective progress.

Sincerely,

Big10+ Deans of Engineering
 (Included below)

Archer, Lynden
 Dean, College of Engineering
 Cornell University

Bashir, Rashid
 Dean, The Grainger College of Engineering
 University of Illinois at Urbana-Champaign

Biber, Robert
 Interim Dean, A. James Clark School of
 Engineering
 University of Maryland

Chandrakasan, Anantha
 Dean, School of Engineering
 Massachusetts Institute of Technology

Farris, Thomas N.
 Dean, School of Engineering
 Rutgers University-New Brunswick

Gallimore, Alec D.
 Dean, College of Engineering
 University of Michigan

Beyah, Rayheem
 Dean, College of Engineering
 Georgia Institute of Technology

Kaveh, Mostafa
 Dean, College of Science & Engineering
 University of Minnesota

Kempel, Leo C.
 Dean, College of Engineering
 Michigan State University

King Liu, Tzu-Jae
 Dean, College of Engineering
 University of California Berkeley

Chiang, Mung
 Dean, College of Engineering
 Purdue University

Nembhard, Harriet
 Dean, College of Engineering
 University of Iowa

Otino, Julio M.
 Dean, Robert R. McCormick School of
 Engineering and Applied Science
 Northwestern University

Pérez, Lance C.
 Dean, College of Engineering
 University of Nebraska

Robertson, Ian M.
 Dean, College of Engineering
 University of Wisconsin-Madison

Sanders, William
 Dean, College of Engineering
 Carnegie Mellon University

Schwartz, Justin
 Dean, College of Engineering
 The Pennsylvania State University

Howard, Ayanna
 Dean, College of Engineering
 Ohio State University

Widom, Jennifer
 Dean, School of Engineering
 Stanford University

Wood, Sharon L.
 Dean, Cockrell School of Engineering
 University of Texas at Austin



The criteria are still being piloted and will be optional for the 23-24 accreditation years.

Criterion 5: Curriculum

- “The curriculum must include...content that ensures awareness of diversity, equity, and inclusion for professional practice consistent with the institution’s mission.”

Criterion 6: Faculty

- “The program faculty must also demonstrate knowledge of applicable institutional policies on diversity, equity, and inclusion and demonstrate awareness appropriate to providing an equitable and inclusive environment for its students that respects the institution’s mission.”





Think-pair-share: How prepared do you feel your institution is to meet these two criteria?

Criterion 5: Curriculum

- “The curriculum must include...content that ensures awareness of diversity, equity, and inclusion for professional practice consistent with the institution’s mission.”

Criterion 6: Faculty

- “The program faculty must also demonstrate knowledge of applicable institutional policies on diversity, equity, and inclusion and demonstrate awareness appropriate to providing an equitable and inclusive environment for its students that respects the institution’s mission.”





In order to prepare for the upcoming changes to ABET, a Summit was held at Penn State in October of 2022.

A total of 71 participants from 20 institutions attended the meeting.



Diversity, Equity, and Inclusion Summit

A Big Ten ++ Engineering Workshop



PennState
College of Engineering

- <https://www.engr.psu.edu/equity-inclusion/dei-summit-22.aspx> -

The Summit was held across 3 days and consisted of speakers, reflection, and team working time.

OCTOBER 16	
Time	Session
5:00 - 6:30 p.m.	Dinner and Welcome Anthony Atchley , acting dean of the Penn State College of Engineering Tonya Peoples , associate dean for equity and inclusion and professor of chemical engineering, Penn State College of Engineering
6:30 - 8:00 p.m.	Social Kick-off with Icebreakers and Networking

OCTOBER 17	
Time	Session
8:00 - 9:00 a.m.	Breakfast
9:00 - 10:00 a.m.	Keynote 1 Tracie Marcella Addy , associate dean of teaching & learning at Lafayette College
10:00 - 10:30 a.m.	Break & Individual Reflection Time
10:30-11:30 a.m.	Breakout Sessions Keynote takeaways/How could you integrate the topic of keynote 1 into your plan?
11:30 a.m. - Noon	Team Collaboration
Noon - 1:00 p.m.	Lunch
1:00 - 2:00 p.m.	Keynote 2 Ebony Omotola McGee , professor of diversity and science, technology, engineering, and mathematics (STEM) education at Vanderbilt University's Peabody College
2:00 - 2:30 p.m.	Break & Individual Reflection Time
2:30 - 3:30 p.m.	Breakout Sessions Keynote Takeaways/How could you integrate the topic of keynote 2 into your plan?
3:30 - 4:00 p.m.	Team Working Time
4:00 - 5:00 p.m.	Networking Event
5:00 - 6:00 p.m.	Break
6:00 - 8:00 p.m.	Dinner

OCTOBER 18	
Time	Session
8:00 - 9:00 a.m.	Breakfast
9:00 - 10:00 a.m.	Team Working Time Create an outline/plan, noting any remaining questions; Teams pair up to provide feedback
10:00 - 11:30 a.m.	Plan Explanation and Feedback Each team has 45 minutes to explain plan, receive feedback, and ask questions Rotate two times
11:30 a.m. - 1:00 p.m.	Lunch and Closing Remarks Justin Schwartz , interim executive vice president and provost, Penn State Evaluation

The Summit also featured two phenomenal guest speakers.



Tracie Marcella Addy
Associate Dean of Teaching and Learning
Lafayette College

Ebony Omotola McGee
Professor of Diversity and
STEM Education
Vanderbilt University
(Now at James Hopkins)





Section 1: Summit Pre-Work

- Teams were required to complete a document before they came to the Summit
- Included:
 - Draft ABET Criteria (as of October, 2022)
 - Create an inventory of institutional DEI resources
 - Idea generation and reflection questions





Activity 1: Create an Institutional Inventory

Create an inventory of DEI resources and initiatives that already exist at your institution.

Please make an inventory of DEI resources and initiatives that already exist at your institution. Please complete the following table.

	Program-Level	College-Level	University-Level
Events, offerings, etc. already in place for students	<i>Example: World in Conversation Event offered in a first-year seminar</i>		
Events, offerings, etc. already in place for faculty			<i>Example: New Faculty Orientation</i>
Available resources (offices, individuals, trainings, etc.)		<i>Example: Office for Equity and Diversity for the College of Engineering</i>	



Please make an inventory of DEI resources and initiatives that already exist at your institution. Please complete the following table.

	Program-Level	College-Level	University-Level
Events, offerings, etc. already in place for students	<i>Example: World in Conversation Event offered in a first-year seminar</i>		
Events, offerings, etc. already in place for faculty			<i>Example: New Faculty Orientation</i>
Available resources (offices, individuals, trainings, etc.)		<i>Example: Office for Equity and Diversity for the College of Engineering</i>	

Think-Pair-Share:
Conduct a mini-
inventory of your
program. What
resources are already
in place at your
program-level?



Section 2: Criterion 6 (Faculty)

- During the Summit, teams completed a Workbook.
- Included two morning activities:
 - Individual reflection
 - Team working time relating to Criterion 6





Activity 2: Criterion 6 (Faculty)

How will your institution ensure faculty obtain knowledge of applicable institutional policies on DEI?

How will they be able to provide an equitable and inclusive environment for its students?

<i>What activities could help meet this objective?</i> (Do this column first, as time permits, you can fill-in the other two columns)	<i>Who is responsible for implementation?</i>	<i>What evidence (if any) would be provided to ABET?</i> (Think about this column next)



Section 3: Criterion 5 (Curriculum)

- Similar structure to Activity 2
- Included two afternoon activities:
 - Individual reflection
 - Team working time relating to Criterion 5





Activity 3: Criterion 5 (Curriculum)

How will your institution ensure students obtain awareness of diversity, equity, and inclusion for professional success?

<i>What activities could help meet this objective?</i> (Do this column first, as time permits, you can fill-in the other two columns)	<i>Who is responsible for implementation?</i>	<i>What evidence (if any) would be provided to ABET?</i> (Think about this column next)



The last day of the Summit, teams did a speed networking event.

- Two 45-minute rotations.
- Presented their plans on each criteria to 2 other teams
- Heard the plans for each criteria from the other teams





A 2023 ASEE paper summarized the evaluation and findings from the Summit.

- Overall, the Summit went extremely well.
- Participants enjoyed discussing the topics with individuals from other institutions.
- Major concerns included:
 - Faculty buy-in
 - Lack of time/money
 - Leadership support
 - Strategizing DEI Curriculum
 - Faculty Training
- The participants want the Summit to continue annually and to keep the community working together.



In October 2023, the Big Ten DEI Summit was held at Georgia Tech

- sites.gatech.edu/2023bigtendei/2023/07/25/home/



Acknowledgements

- Thank you to the Summit Planning team.
- Thank you to the Penn State team for helping to organize and facilitate the Summit.
- Thank you to the DEI Summit Participants and supporting institutions.
- Thank you to Georgia Tech, who hosted the DEI Summit in October 2023.

