Seattle University's Response to ABET's Pilot Criteria

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Abstract

Our University's Civil, Computer, Electrical, and Mechanical Engineering programs voluntarily participated in ABET's 2023-2024 pilot study to show how the program satisfied ABET's proposed language to incorporate diversity, equity, and inclusion (DEI) into their accreditation standards. ABET's initiative aimed to evaluate how well programs integrate DEI principles into the curriculum (Criterion 5) and faculty awareness and skills (Criterion 6) while aligning with the university's mission.

Each program incorporated DEI into coursework, student experiences, and professional preparation. Capstone design courses included microaggression and implicit bias training, ensuring students developed awareness of DEI in team dynamics. Civil Engineering engaged students through external speakers, DEI-focused discussions, and student-led skits, while Computer and Electrical Engineering emphasized ethical responsibility and inclusive project work. Mechanical Engineering introduced an "inclusivity meter" to assess classroom climate and piloted a course on inclusive design.

Faculty development efforts were equally robust. Professors attended DEI training sessions and engaged in university-wide initiatives such as the NSF ADVANCE and RED grants, which promoted equitable hiring and inclusive teaching. Additionally, DEI ambassadors, advisory councils, and faculty committees provided continuous feedback to improve program inclusivity.

Participation in the pilot study allowed the college to comprehensively catalog and examine the work being done by individual programs to support DEI. Programs also received feedback from external reviewers. These discussions enhanced current practices in the college to support students from varied backgrounds and identities, enhancing the education we can provide our students.

Introduction

In recent years, ABET, the accrediting body for engineering and technology programs, introduced optional pilot criteria to incorporate diversity, equity, and inclusion (DEI) into their accreditation standards. This initiative aimed to evaluate how well engineering programs integrate DEI principles into their curriculum (Criterion 5) and faculty awareness and skills (Criterion 6). The process for ABET to approve these optional pilot criteria involved extensive consultations with educational institutions, industry stakeholders, and DEI experts. The criteria were approved by the ABET Engineering Area Delegation in October 2022 for the 2023-2024 and 2024-2025 accreditation cycles [1].

In the 2023-2024 accreditation cycle, the proposed modifications were piloted. Institutions could opt to participate by submitting a Supplemental Self-Study Report (SSR) detailing their adherence to the proposed DEI criteria [2]. This report was to be uploaded as a separate PDF file on the institution's page in the ABET Accreditation Management System by the specified deadline. The pilot aimed to gather insights on how programs address DEI aspects, with the understanding that any shortcomings related to these criteria would not impact the final accreditation decision. According the ABET, 159 programs at 30 institutions participated in the pilot [3].

Due to recent federal pushback on DEI initiatives, ABET decided to remove all references to DEI from their accreditation criteria in early 2025 [4]. However, we believe participation in the pilot study was beneficial because it allowed us to comprehensively examine our approach to supporting and promoting DEI. We hope that these efforts will serve as a resource for other engineering programs, providing insights into effective strategies for fostering inclusivity. By sharing our experiences, we aim to support institutions seeking to strengthen their DEI initiatives, even in the absence of formal accreditation requirements. Sustained commitment to these values will ensure that engineering education remains equitable and accessible to all students.

Background

Seattle University is a mission-oriented university with four distinct engineering programs: Civil, Electrical, Mechanical, and Computer Engineering. Our university is “mission state *to be added after anonymous review,*” emphasizes the importance of preparing students for professional practice. Each program is dedicated to fostering inclusive education and preparing students for diverse workplaces. These efforts are consistent with the university’s strategic directions (*https://www.seattleu.edu/strategic-directions/*) and supported by the university’s Office for Diversity and Inclusion (*https://www.seattleu.edu/office-of-diversity-and-inclusion/*).

Criterion 5

ABET Criterion 5 is related to the program curriculum. The supplemental pilot criteria asked programs to describe “how content ensures awareness of diversity, equity, and inclusion for professional practice consistent with the institution’s mission.” All four engineering programs at the institution have integrated DEI principles into their curricula. This includes incorporating DEI statements in course syllabi, providing training on microaggressions and implicit biases, and engaging students in DEI-focused discussions and activities. Each program has tailored its approach to fit its specific context and objectives.

All four engineering programs have integrated DEI principles into their curricula through various class-based activities. These activities include DEI-focused discussions, external speakers, student-led skits, workshops, capstone design courses, inclusive practices in team projects, sociotechnical curricula workshops, and modifications to Program Educational Objectives (PEOs). Each program has tailored its approach to fit its specific context and objectives.

The first and most visible action by the programs is the choice made by faculty to include a statement on diversity and inclusion on course syllabi. The specific statements used vary slightly but set the program vision and values with respect to diversity and inclusion within the engineering profession. Two sample syllabi statements are shared below:

Sample Syllabus Statement 1

Seattle University and the Department of (Name) are committed to creating and sustaining an inclusive culture that values diversity and works for equity in opportunity and outcomes. Diversity is a core value we espouse as part of our mission. We respect our students' identities and we strive to create a learning environment where every student feels welcomed and valued.

We ask for your help in fostering a welcoming and open environment, treating others with respect, and collaborating toward equity. Please refer to the Student Code of Conduct and to the Office for Diversity and Inclusion for more information and guidance. If you personally experience bias, harassment or discrimination, or witness any of these, you are encouraged to reach out to your instructor, your advisor, the (Name) Department office, the College Advising Center, Diversity, Equity, and Inclusion Student Ambassadors, or any of the resources listed on the Diversity and Inclusion resources page including the Office of Institutional Equity.

Sample Syllabus Statement 2

COMMUNITY & INCLUSIVITY: Seattle University has a stated commitment to diversity and inclusivity. In part, this includes an expectation that all members of our campus community treat one another with respect and care in the classroom. Actions or statements which espouse the supremacy of one group of people over another, or which marginalize any group, are not welcome in our classroom. Such attitudes are destructive to both our learning process and our community. All students in this course are welcomed and valued.

Racism, sexism, ableism, homophobia, transphobia, xenophobia, religious prejudice, and other forms of discrimination have no place on our campus or in our classroom. Our class, like our campus, is one community. We learn together. We work together. And we will respect one another. We teach all students, regardless of background or beliefs. All students are equally welcome and valued. Growth mindset includes our ability to grow together, to learn to be more tolerant, and to become more compassionate. No one is being asked to leave the table. Everyone is being asked to make room at the table, so that everyone has a seat and a fair chance.

If you find that anything in our class is failing to live up to these principles (including if you feel that I myself have failed to live up to them), I encourage you to bring this issue up, either to me, or to your department chair, your advisor, advisors in the College Advising Center, or another faculty or staff member you feel comfortable talking with, who could pass on your concerns to myself or my department chair. You are also invited to reach out to Diversity, Equity, and Inclusion Student Ambassadors on Instagram.

Programs offered DEI-focused discussions and hosted external speakers. The Civil Engineering program invited external speakers to discuss the sub-disciplines of civil engineering, emphasizing the value of diversity in the workplace and the need to include marginalized groups in decision-making. Similarly, Computer and Electrical Engineering programs emphasized ethical responsibility and inclusive project work through discussions and case studies, while Mechanical Engineering included DEI-focused discussions in various courses, inviting external speakers to talk about inclusivity in engineering design and professional practice. These discussions provided a forum for open feedback and student engagement on DEI issues.

Inclusive practices in team projects were emphasized across all programs. All programs participate in the fall capstone design course that included training on microaggressions and implicit biases. This training was led by an external facilitator to prepare students for teamwork in diverse professional environments. The Mechanical Engineering program's Integrated Engineering Design Projects courses kick off team design activities with a "Working Together" exercise, emphasizing the importance of inclusive practices and asking students to reflect on their past experiences with team dynamics. Computer and Electrical Engineering programs included similar DEI-focused activities in team projects to promote inclusive practices and ensure all team members felt valued and respected. Mechanical Engineering integrated similar exercises designed to foster a welcoming and collaborative environment. An "inclusivity meter" was used in various courses to gauge students' feelings of inclusion and participation [6]. Example questions from the inclusivity meter include:

Did I feel included in lab team meetings last week?
- *Totally*
- *Pretty good*
- *Yes and no*
- *Somewhat*
- *Not at all*

Mechanical Engineering also offered a special topics course on inclusive design, which was well-received by students.

Programs also ensure sociotechnical content is woven throughout the curriculum. Civil Engineering organized workshops on sociotechnical curricula, defining sociotechnical content and providing examples of integrating it into technical courses. All programs engaged in the university's strategic initiative, Revise and Reimagine Our Curriculum (RRC), to prepare students to address societal challenges such as racial and economic justice, climate change, and the impact of technology on society. Computer and Electrical Engineering is developing modules related to these topics to include in technical courses. All students take general education courses that include diversity, equity, and inclusion topics that are important to our university community.

Program Educational Objectives (PEOs) were examined, and, in some cases, modified to reflect DEI principles. Computer and Electrical Engineering programs modified their PEOs to emphasize professional formation, technical preparation, community stewardship, and personal

growth. The Civil Engineering Advisory Board recommended including a PEO focused on DEI, which the program is in the process of adopting.

Student-led skits and workshops were a key component across all programs. The College DEI Student Ambassadors, mentored by faculty in the college, were tasked with improving the college community and educating the student population about DEI topics. These ambassadors, representing various levels of study and diverse backgrounds, played a crucial role in maintaining a supportive and inclusive community. They organized events such as DEI Townhalls and professional development seminars featuring diverse speakers. They also developed theater-based mini-workshops on microaggressions and implicit bias, which included skits followed by discussions on how to respond to such situations. Ambassadors were invited to present skits to engineering classes in all programs to inform students about typical experiences of underrepresented groups at the university. These skits were followed by discussions on how to respond productively to such situations.

Criterion 6

ABET Criterion 6 is related to the faculty that support engineering programs, emphasizing the importance of having qualified and competent faculty. The supplemental pilot criteria template asked programs to "Describe how the program faculty 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." At our institution, faculty engagement in DEI initiatives is a key focus across all programs. Activities included attending DEI training sessions, participating in university-wide initiatives, and establishing DEI ambassadors and advisory councils to provide continuous feedback and support.

Faculty members across all programs participated in DEI-focused workshops, professional development opportunities, and university-wide initiatives. The Office of Diversity, Equity, and Inclusion and the Center for Faculty Development hosted training sessions that aimed to increase their understanding of how to create a more inclusive learning environment both in and outside of the classrooms. Department chairs also attended university DEI workshops designed specifically for university leaders that included training for equitable searches and hiring. Engineering faculty also developed and led Bystander Intervention Workshops for faculty in the college. Faculty also participated in DEI taskforces or committees. All programs had faculty members serving on the college diversity committee, while the Electrical, Computer, and Mechanical Engineering faculty also serve on the university DEI taskforce, collaborating with others to promote diversity and inclusion throughout the institution. In addition to supporting the college and university culture, faculty participation in these activities allowed them to bring issues back to program meetings, sharing what they learned with other faculty.

Programs routinely worked to promote a supportive and inclusive environment for all students. Faculty regularly engaged in discussions during program meetings about how to better meet the needs of all their students, considering their diverse backgrounds and needs. They also solicited feedback from student ambassadors who represent various student groups, ensuring that the students' voices were included in shaping the programs. Furthermore, faculty in Computer and

Electrical Engineering provided guidance to affinity-based student organizations such as the Society for Women Engineers (SWE) and the Society of Hispanic Professional Engineers (SHPE), which support underrepresented groups in the engineering field.

Another important effort was to improve hiring and recruitment practices to ensure greater inclusivity within the faculty. Programs developed rubrics for assessing candidates during the hiring process, designed to mitigate implicit biases. Electrical and Computer Engineering programs also emphasized equitable and fair hiring practices as part of their DEI efforts. These combined efforts across the programs demonstrate a commitment to fostering an inclusive environment through continuous faculty development, active participation in university-wide DEI efforts, and meaningful engagement with students.

Finally, the university was awarded an NSF grant that focused on inclusive promotion practices, resulting in changes to the faculty handbook. Faculty across the engineering programs participated in these efforts, including involvement on the internal advisory board as well as the university handbook committee. Several faculty also participated in listening sessions related to the work. Department chairs were also involved in training sessions after the new guidelines were implemented.

Conclusion

The institution's proactive response to ABET's proposed DEI criteria highlights its commitment to fostering equitable learning environments and advancing diversity in engineering education. By embedding DEI principles into the curriculum and faculty engagement, the institution not only enhanced student engagement and broadened perspectives but also better prepared graduates for diverse workplaces. Despite the recent removal of DEI criteria from ABET's standards, the institution's efforts demonstrate the lasting impact of integrating these principles into engineering education.

References

[1] ABET, "Optional Pilot Criteria for Diversity, Equity, and Inclusion," 2022. [Online]. Available: https://www.abet.org. [Accessed: 10-Mar-2025].

[2] ABET, "E007 Supplemental EAC Pilot Criteria Template 2023-2024," 2023. [Online]. Available: https://www.abet.org/wp-content/uploads/2023/05/E007_Supplemental-EAC-Pilot-Criteria-Template_2023-2024.docx. [Accessed: 10-Mar-2025].

[3] ABET, "EAC DEI Pilot 2023-24: Report to Institutions," 2024. [Online]. Available: https://www.abet.org/wp-content/uploads/2024/10/EAC_DEI-Pilot_2023-24_Report-to-Institutions.pdf. [Accessed: 10-Mar-2025].

[4] Inside Higher Ed, "STEM Accreditor Drops DEIA from Its Standards," 2025. [Online]. Available: https://www.insidehighered.com/news/quick-takes/2025/02/21/stem-accreditor-drops-deia-its-standards. [Accessed: 10-Mar-2025].

[5] J. M. Hamel, T. R. Shuman, K. Kuder, Y.-L. Han, and K. C. Cook, "One Program's Response to a Pilot Accreditation Criteria Concerning Diversity, Equity, and Inclusion," in Proceedings of the ASME International Mechanical Engineering Congress and Exposition, IMECE2024, November 17-21, 2024, Portland, Oregon.

[6] K. Ejia, Y.-L. Han, and J. Turns, "Inclusivity Meter: Tracing How it Worked and What Was Learned," in *2021 ASEE Annual Conference and Exposition*, Virtual: Online: ASEE, 2021. [Online]. Available: https://peer.asee.org/37318.