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RE: Oregon State University, College of Engineering – Supporting Student Success for Underrepresented Students Through Recruitment, Curriculum, and Co-Curricular Activities
Joint Task Force on Student Success for Underrepresented Students in Higher Education (“Task Force”)

Dear Chair Alonso Leon and Members of the Joint Task Force on Student Success for Underrepresented Students in Higher Education:

My name is Scott Ashford, and I am the Kearney Dean of Engineering at Oregon State University. I submit this testimony on behalf of the College of Engineering (the “College”) and its leadership team. Thank you for the opportunity to provide public comment and highlight several ways that our College is fostering student success for underrepresented students.

Over the last several years, the College has made deliberate changes to its student recruitment and outreach, curriculum, and faculty diversity, and developed new ways to support co-curricular activities and groups. All of these changes are informed and guided by the College’s access mission: to make our engineering education more accessible and affordable to all, especially underserved communities in our state.¹ We share our successes and our commitment to this mission to illustrate how we are fostering student success.

We also highlight this work to emphasize the importance of funding engineering programs across the state. Our College—along with many others—is doing incredible work to engage and support our students from underserved communities. However, it is essential that this work be supported through robust, comprehensive, and consistent funding measures. For example, each year, several engineering programs across the state, including Oregon State University, Portland State University, and Oregon Institute of Technology, rely on the Engineering Technology Sustaining Funds (ETSF) to invest in critical student recruitment and retention efforts. We believe the legislature should continue to increase funding measures, like the ETSF, to support this work, especially for programs and institutions that have demonstrated success at fostering diversity, inclusivity, and accessibility through education. We look forward to the proposals the Task Force develops based on public comment and other input provided throughout these sessions.

¹ See Strategic Plan 2020-2025, College of Engineering, Oregon State University, at <https://engineering.oregonstate.edu/strategic-plan-2020-2025>. The 2020-25 Strategic Plan is framed around four goals relating to research, education, community, and partnership. The community goal in particular seeks to cultivate a community that embodies collaborative and inclusive excellence.

Outreach and Recruitment

Our work fostering student success starts with outreach and recruitment, ensuring that we are making our engineering education more visible and accessible for all communities. The College has substantially increased its number of engagements with the K-12 communities. This past year, the College has collaborated with several community organizations and school districts and participated in several programs to amplify engineering education. Some of those collaborations, as well as planned events this year, include:

- Collaborating with the Washington County Chamber of Commerce for their School to Career Series (this engaged our COE alumni and current students);
- Collaborating with Portland Public Schools for their Engineering Academy Series (this engaged our COE alumni and current students);
- In collaboration with Portland Public Schools, hosting a three-day teacher externship program for Oregon high school teachers and counselors, which will teach them about engineering and incorporate engineering activities in their classrooms;
- Participating in Washington County's Centro Cultural's *Día de los niños* event, with a group of current students and STEM activities;
- Participating, for the first time ever, in the Oregon Migrant Summer Programs, which will engage high school students from migrant families in a week-long, residential engineering summer camp; and
- In collaboration with Building Blocks 2 Success, Lawrence Griggs Office of Black and Indigenous Student Success Office, and OSU's Precollege Programs, hosting a week-long, residential engineering summer camp.

This work, along with other recruitment efforts, is informed by the College's first-ever Recruitment Strategic Plan. This plan, which is based on data, outlines where the college should focus its recruitment efforts in the future. Today, given existing gaps in yield rates (*i.e.*, converting students from being admitted to accepting our admission offer) between women and students of color, in comparison to men and white students, respectively, our College has focused on ways to better recruit students of color and women.

Relatedly, we are ensuring that students remain supported financially throughout their education—from admittance to graduation. The College has overhauled its scholarship management system, including hiring a new scholarship administrator who ensures students are timely notified of scholarship application deadlines, and that funds are timely distributed to students. We have also increased the number of recruitment scholarships, which are intended to recruit high-achieving, traditionally underrepresented students.

One remarkable example of this is the Catalyst Scholars Program. Started in 2020, the Catalyst Scholars Program is a unique partnership with the College and the OSU Foundation to address the cost of education, specifically bridging the gap between traditional funding sources—such as loans, grants, and scholarships—and the cost of attending college for high-achieving, first-generation Oregon students and other students with unmet financial needs. The Catalyst Program helps support qualified students in their undergraduate experience, providing \$8,000 in annual tuition and fee assistance, as well as an additional \$2,000 for experiential learning activities.

Without private investment, the Catalyst Scholars Program would not be possible. There needs to be a concerted effort to support and empower programs that have demonstrated success in building diversity in our classroom and offering first generation students an opportunity at an engineering education. We hope the Task Force issues recommendations that would bolster scholarship opportunities and recruitment efforts like these.

Student Success in the Classroom

In order to foster student success in the classroom, our College has removed systematic barriers that have traditionally prevented our students from graduating on time and significantly increased the diversity of our faculty, making it more representative of the students we serve.

Through the College's unique first-year program, *Engineering+*, our students explore a broad range of disciplines and collaborate with peers on real-world engineering issues and challenges. It supports first-year retention and removes impacts toward timely graduation because it allows students to make their critical decision of declaring a major at the end of their first year. Students have provided overwhelmingly positive feedback about this interdisciplinary approach, and it has fostered a deeper sense of collaboration with peers.

We have made concerted efforts to ensure that our faculty is more representative of our student population. Since the inception of our strategic plan in 2014, the College has made significant changes to its recruitment and hiring process. As of March 2022, nearly 26% of the faculty in the college—more than 50 individuals in total—are women. This puts the College among the top R1 public engineering programs in the country in percentage of tenured or tenure-track faculty who are women. Our deliberate change to the faculty hiring process has served as a model for other engineering programs across the country.

We want all of our students—especially those who are first-generation students or are from traditionally underserved communities—to feel welcome and valued in their education and contributions in the classroom. We believe our focus on changing the curriculum and increasing the diversity of faculty has created a greater sense of inclusivity for our students. And ultimately, this fosters a collective culture of student support and success.

Supporting Co-curricular Activities

The College's Center for Diversity and Inclusivity (the "Center"), which was launched in January 2019, supports students from underrepresented backgrounds in the College. The Center supports eight affinity organizations² by providing them additional funding, guidance, and professional development opportunities. Additionally, the Center collaborates with other units on campus, such as the Cultural Resource Centers, the Human Services Resource Center, Financial Aid Office, advising units, and employer relations teams, to support the retention of students with marginalized identities. For example, the Center:

- Helps students with emergency housing or emergency funds;

² See Student Organizations, Center for Diversity & Inclusion, College of Engineering, Oregon State University, at <https://engineering.oregonstate.edu/divinclusion/organizations>.

- Collaborates with key industry partners to provide students with professional development opportunities or essential connections to workforce;
- Helps students find research or other employment opportunities on campus; and
- Facilitates numerous events throughout the year (in partnership with the affinity organizations and campus stakeholders) to help students build and find their communities on campus.

Workforce Engagement

We recognize the importance of increased diversity in the workplace and engineering field. We know our College plays an essential role in building the future workforce and ensuring that our students are equipped with the critical insights, perspectives, and experiences that today's employers and business community are looking for.

Toward this goal, our College has significantly increased the opportunities for students and employers to connect directly through networking, mentorships, and other experiential learning opportunities. By facilitating these connections, our College is helping support a broader cultural change in the engineering field. We are helping employers to connect with graduates that fit their company's needs and values, especially those who are similarly focused on building diversity and inclusivity in the engineering profession. And we are supporting our students' journey in finding post-graduation employment that sets them up for success throughout their career. For instance, our Leadership Academy, which is an innovative student experience developed with the support of industry partners such as Boeing, NW Natural, Pacific Power, and Nike, empowers students to build and foster a more inclusive working environment by teaching them the skills to become ethical, inclusive, and collaborative engineers. This unique connection between students and professionals prepares OSU engineering students to succeed in a transdisciplinary and global engineering environment. In doing so, OSU engineers enter the workforce ready to make positive impacts in their workplace and community.

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We view our engineering students as future leaders in our state. Ultimately, by engaging K-12 students and supporting our students from admittance to graduation, the College of Engineering is helping to build a more diverse, collaborative, and technically skilled workforce that can tackle the greatest engineering challenges. Our College's work, however, cannot be done alone. We hope that this brief summary of our work fostering student success for underrepresented students emphasizes the importance of strong, consistent funding for engineering programs across the state.

Thank you for the opportunity to provide testimony, and we look forward to the Task Force's proposals and recommendations.

Sincerely,



Scott A. Ashford, Ph.D., P.E. (California)
Kearney Dean of Engineering