

EXCEED Program Succeeds in Student Prep

Revitalized summer bridge clears pathway to university engineering

Nearly 60 incoming freshman and transfer students joined an online program this summer to brush up on math for engineering. Freshmen took a calculus prep series and were tasked with completing a virtual robot project. Transfer students attended an advanced math series and worked on an electronics project. In addition, they listened as eight professors (including Dean Ehrman) taught how important advanced mathematics is in fields such as heat transfer, epidemiology, circuits, flight dynamics, and even profit maximization.

The **Ex**cellence in your **Eng**ineering **E**ducation, or EXCEED Program, led by Associate Dean Jinny Rhee, gives incoming undergraduates the knowledge and skills they need in order to be successful in engineering programs. “We revived EXCEED after a five-year hiatus to provide an additional engagement opportunity for our incoming students in today’s unexpected virtual learning environment, driven by COVID-19,” Rhee said. The overall goal of the program is to retain and graduate a greater and more diverse engineering workforce.

The roughly 40 students who completed the program earned virtual badges and were showcased in the College’s weekly student newsletter. “When the program is in person, we have a captive audience and they have no choice but to finish it,” said Rhee. “However, the virtual format does allow for more flexibility, and some students were also working and tending to other obligations at the same time. We had a tech subsidy for those who did not have the equipment to participate, and we waived the program fee for those who could not afford it.” The 2020 EXCEED program was funded by the Charles W. Davidson Endowment.

In a post-program survey, the participants agreed or strongly agreed that it increased their confidence in attending SJSU, and that they felt they belonged in

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the College of Engineering. “We also plan on tracking this cohort through their programs to see if they are retained in our programs at a higher rate,” said Rhee.

In addition, students felt that the program increased their confidence in math and their teamwork skills. “I loved how smooth it went, all being online,” remarked one of the students in the survey. “I really see myself coming to SJSU, growing and learning with well experienced faculty and helpful students.” Another commented, “In spite of this whole pandemic, EXCEED helped students to connect with other students and faculty before the school year began.”

Dr. Rhee hopes to scale up the EXCEED program to around 300 students next year, or about 25% of the College’s incoming undergraduates. And she has a message for alumni: “If you would like to come and speak to our incoming undergrads, please let me know! The alumni who spoke to our incoming students inspired them, and this helps them start career exploration and development of their identity in the field.” Interested alumni can contact her at Jinny.rhee@sjsu.edu. ☺