

# EXPOSURE



## STUDENTS OF TODAY, ENGINEERS OF TOMORROW

*Summer camps inspire the next generation of engineers*

**Story by [Fresno State](#)**

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For many, summer break is a time for vacation and relaxation. For the Lyles College of Engineering, it's a time to demonstrate the endless possibilities in engineering to K-12 students.

Over four weeks in June and July, elementary, middle school and high school students participated in hands-on activities combined with academic lectures and field trips covering various topics such as engineering construction management and architectural studies.

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“Our goal is to expose a community of students from diverse backgrounds to engineering disciplines and Fresno State,” said Hernan Maldonado, director of the Lyles College Pathways Student Services. “Through these camps, they are hearing from our professors firsthand about what they can do in the industry with a degree in engineering or construction management.”

## Young Minds Explore Engineering at Fresno State



Engineering summer camps at Fresno State began in 2010 with just 20 high school students. Maldonado said the lack of engineering pathways programs in high schools at the time sparked the creation of the camps.

A middle school session was soon added and in 2021, the camps expanded to include sessions for elementary school students. Over the years, enrollment has grown to reach a maximum capacity of 42 students per session with waiting lists of up to 20 students.

This year’s summer camp brought students from as far as San Diego, Riverside and the Bay area to the Valley.

“We get a lot of great feedback from the students and their parents, and we have had many students who are excited to come back and participate multiple times,” said Maldonado. “We also always get a good number of students from the camps that end up enrolling and being part of the Lyles College of Engineering, so that’s really exciting because we’re seeing that it’s making an impact, and it’s actually producing students for our college.”



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Maldonado works closely with Lyles College faculty to develop camp activities that incorporate current hot topics such as cybersecurity, aerospace, automotive engineering and structural activities. This year's camp included a field trip to the NASA Jet Propulsion Laboratory in Pasadena.

Whether it's something completely new or something they've seen on TV, Maldonado aims to keep it exciting for the students. He said the Fresno State student facilitators also play a key role in the camps because they bond with the K-12 students and share what college life is like.

Yue Yang is an international student from China who is pursuing a master's degree in electrical and computer engineering. She decided to be a facilitator for this year's camp as a way to give back to the college for helping her grow professionally and personally.

"This college is the best decision I made to start my engineering journey as an individual with a limited background in this country," said Yang. "I want to give back and I hope more and more young generations are interested in studying technologies and engineering at Fresno State."

Yang noted that some students did not want to leave at the end of the camp, which she believes demonstrates that the camp was unforgettable and fun for them.

She said that not only did they gain engineering skills, but they also learned how to respect others, how to communicate with their teammates, how to react when they failed competitions and how to figure out better solutions for their designs.



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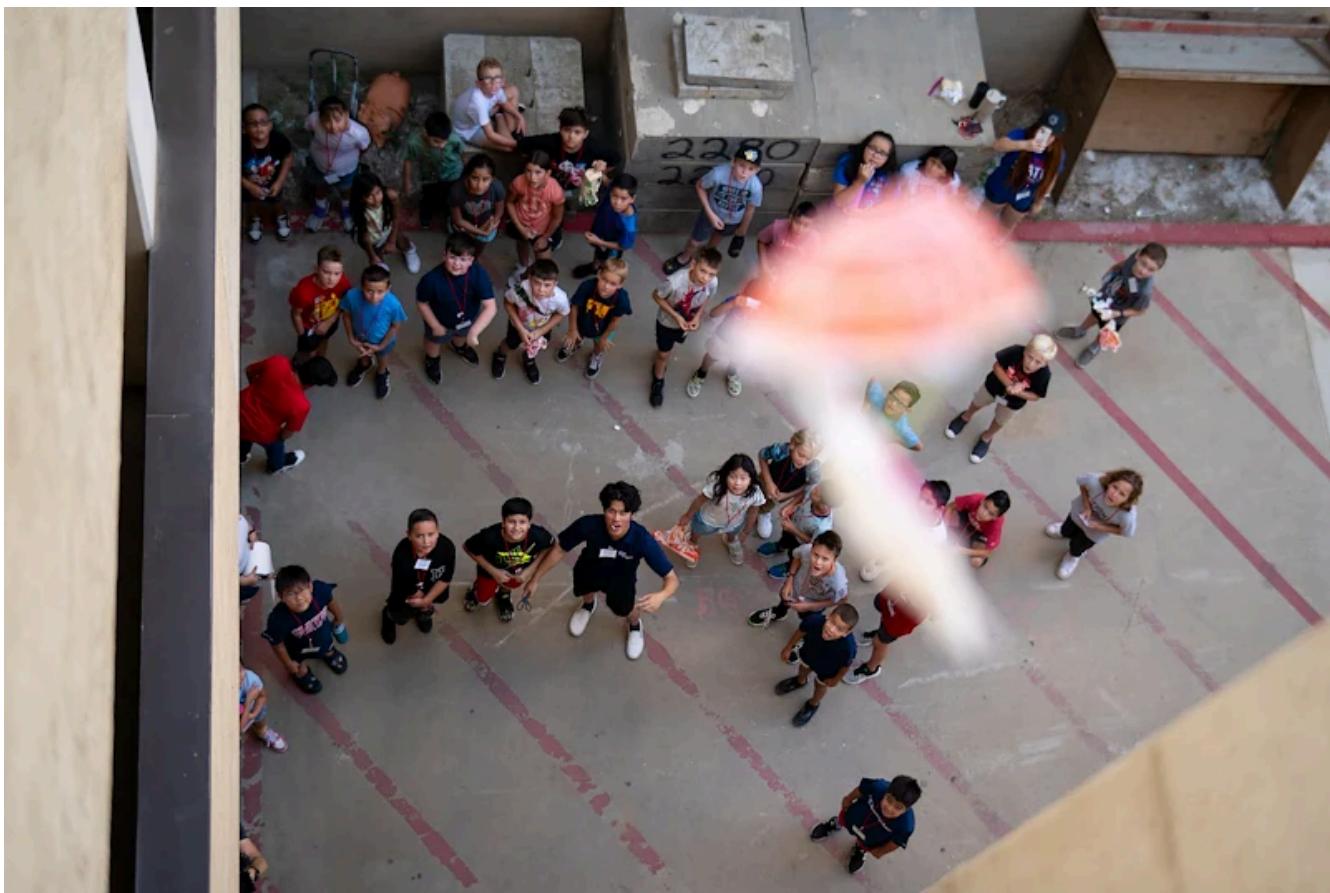
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For Mariano Gutierrez, 6, his favorite moments of camp were building his own drawing robot, eating at the dining hall and meeting Victor E. Bulldog IV, Fresno State's live mascot.

"Our child has always been a hands-on learner and intrigued with how things work," said Lorena Calderon, Mariano's mother.

"He enjoyed learning how things are built through trial and error. The program really showcased the many careers in engineering and opened the possibilities of so many future paths."

Calderon said the camp truly makes a difference in building self-confidence at this age level. Learning new material and then getting to apply it on a project along with student staff really helped her son believe in himself.

"As someone who works in education, and as first-generation parents, we appreciate Fresno State's programs," said Calderon. "We know what a difference the program makes on students, especially at a young age when they are just starting their educational journey. What a great way for them to start building a good foundation for their future successes."



## Discover Fresno State

Explore the majors and courses offered at the Lyles College of Engineering.

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**Footnote:** Story by Yesenia Fuentes – Lyles College of Engineering, Video by Jeff Phillips, Photos by Cary Edmondson – University Marketing and Communications

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