



CAL POLY
Extended, Professional
& Continuing Education

COLLABORATIVE PARTNER



SUMMER
SPRINGBOARD

Robotics

New student admissions for
summer 2026 are open.

2-Week Course

This is a two-week program where you'll
focus on one course for the entire duration.

Program Highlights

- Core electronics: voltage and current basics, breadboarding, wiring safety
- Programming for robots: digital and analog I/O, PWM and timing
- Motor control: DC motors, servos, motor drivers, gearing, torque vs. speed
- Locomotion and odometry: dead reckoning, turning arcs, path execution
- Integration: sensor-actuator loops, iterative testing and parameter tuning
- Mechanical assembly: chassis alignment, wheelbase setup, caster tuning
- Debugging: serial monitor and logging, fault isolation, safe test practices

2026 Dates

- Session 2: July 19 - July 31



Academic Program Overview

This program introduces students to the mechanics, electronics and intelligence behind autonomous machines. Students learn how to build, wire and program robots that can sense and respond to their environment. Through daily hands-on challenges, they develop a foundation in motors, sensors, microcontrollers and autonomy.

For their final project, teams design and demo a robot that can navigate and make decisions on its own, simulating real-world robotics applications.



Excursions

Tentative excursions include:

- Agricultural mechatronics Lab
- TRIC Robotics

Instructors

Dr. Bo Liu, Cal Poly SLO

Dr. Bo Liu is a Professor in the BioResource & Agricultural Engineering Department at Cal Poly State University. He specializes in mechatronics, robotics, and automation, applying these technologies to address challenges in agriculture. Dr. Liu teaches courses that prepare students for the future of agricultural innovation, including agricultural robotics and automation.



Course Structure

There are nine three-hour class sessions over the two-week course. During week one, students have class from 9 a.m.-noon, Monday through Friday. During week two, students have class from 9 a.m.-noon Monday through Thursday. Wednesday afternoons are dedicated to additional academic time (excursions, speakers).

Tuition Information:

Residential Students

- **Includes:** all meals, lodging, excursions, academic course and weekend excursions
- **Excludes:** optional airport pickup and drop-off service (available for an additional fee)
- **Price:** \$5,398

Commuter Students

- **Includes:** lunch, academic course, excursions, programming from 9am to 5pm, Monday-Friday
- **Excludes:** lodging, breakfast, dinner and weekend excursions
 - Weekend excursions can be added on for \$125 per day
- **Price:** \$2,998

Supplements:

- Application fee: starting at \$99 (mandatory, nonrefundable)
- Tuition Protection Plan: Allows for cancellation for any reason up until the day of the program. Click [here](#) for more info.

Summer Springboard programs are not run by our campus partners (with the exception of Cal Poly, University of Washington Foster School of Business, and NYSID which are run in partnership with SSB). Universities and their affiliated departments and partners do not control and are not responsible or liable in any manner for any part of the Summer Springboard program.



Typical Schedule

8AM	Breakfast	
9AM	Academic Course / Commuter Student Arrival	
12PM	Lunch	
1:30PM	Academic Excursions or Recreational Activity	
3:30PM	College Readiness Workshop or True You	
5PM- 6:30PM	Commuter Student Departure	
6PM	Dinner	
7PM	Clubs	
10:30PM	Night Checks	

[More info on Airport Transfer](#)

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