

ABOUT US

Cal Poly Racing is California's largest student chapter of the Society of Automotive Engineers (SAE). Our team is composed of over eighty active members, and each year we design, manufacture, test, and compete with three innovative race vehicles as participants in the SAE Collegiate Design Series. This series challenges university students from around the world to apply their skills outside of the classroom as part of a project that closely imitates industry practices. Cal Poly Racing is the only team in California that fields vehicles in all three of the series' major competitions: Formula SAR, Formula SAE Electric and Baja SAE.

Our vehicles are evaluated by industry experts not only for their performance characteristics and incorporation of innovative designs, but also for their potential as production items. Because of this, we are more than just a team of engineers. Cal Poly Racing is composed of students from various disciplines who function together as a business. This enables our members to practice project management, finance and marketing in addition to engineering. The experience and skills developed by members of our team cannot be acquired in any other university setting, and this gives us unparalleled preparation for success in our careers.

To meet our ambitious competition goals each year, Cal Poly Racing requires the generous support of our industry partners for materials and services. We seek to develop mutually beneficial relationships with our partners, who choose to contribute materials, knowledge, services, or other forms of support. In return, we offer partners increased brand recognition and networking opportunities with our talented student members.

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BAJA CAR SPECS

This rear wheel drive vehicle has a turning radius of just under 6 feet, a top speed of 38 miles per hour, and is capable of safely and reliably overcoming tough terrain. It features a unique five link suspension, Fox Float air shocks, a 10HP Intek Model 20 engine - generously provided to all teams by Briggs and Stratton - a fine-tuned continuously variable transmission, high impact custom body panels and skid plates, and a custom build high efficiency gearbox.



ABOUT BAJA SAE

Our Baja SAE team has top performing cars, placing 12th at the Washington competition in 2013, 9th at the 2014 competition in Texas, and 5th at the 2015 competition in Oregon. The competition challenges the car during a 4 hour endurance race, rock crawl, hill climb, and acceleration challenges. These events are designed to push our engineering designs to failure, and rolling vehicles is a common result. We train our drivers to read the demanding off-road courses through vigorous testing, which also ensures that our designs will be reliable throughout the competition.

ABOUT FORMULA SAE

At the Formula SAE Lincoln competition in 2015, Cal Poly's racing combustion vehicle placed 7th in the Autocross event. Of the 65 teams at the competition, only six were faster - most by a very slim margin. Our Formula SAE Electric vehicle endured extensive testing last year, demonstrating that we are one of the few teams in the United States capable of reliably running one of these vehicles.

FORMULA CAR SPECS

This year, our larger, unified Formula SAE team has designed its combustion and electric vehicles with as many similarities as possible. This strategy enables us to incorporate proven designs from both previous vehicles, manufacture the new vehicles in parallel, and develop new innovations at a rapid pace. The combustion and electric vehicles will share suspension, steering, brakes, ergonomics, aerodynamics, and drivetrain systems with only minor configuration differences. Both vehicles will utilize identical front carbon monocoques as driver cockpits. The layout process for our monocoque design has been significantly overhauled to improve chassis stiffness. Both cars will share a suspension system that incorporates new boxed-steel uprights that are 33% lighter than any we have developed before.

The driver controls system on our combustion vehicle will incorporate no-lift upshifts and rev-matched downshifts to maximize drivability and shave precious seconds off of our lap times. Our electric car's powertrain will benefit from regenerative braking, which maximizes range, and a stiffened drive-train for increased power delivery.

