



**BRUIN
RACING**

Bruin Racing Baja SAE



2023-2024

Sponsorship Information

WHO ARE WE?



Bruin Racing Baja SAE is the official UCLA student engineering team competing annually in the intercollegiate Baja SAE series.

Our mission is to:

- **Train and educate** our members, with zero barrier to entry
- **Provide hands-on experience** in design and manufacturing
- **Emulate a professional engineering team** following industry-applicable best practices and standards
- **Design and manufacture** a single-seat off-road vehicle

We do this without charging any membership fees, and with limited financial support from UCLA itself. While we do as much as possible with our resources, **we rely on sponsors like yourself** for the funding, components, manufacturing services, and technical feedback necessary to advance our team to the next level of engineering performance.

By sponsoring Bruin Racing, you'll be supporting the development of an exceptional group of students. Our members graduate with up to four years of experience on a fast-paced, high-achieving engineering team, and go on to work in all areas of industry.

We hope this packet provides you with a perspective on our team's goals, structure, and needs, as well as what Bruin Racing can do for you.

Welcome to the Bruin Racing family!

Kyaw Si Thu, Managing Director

Beni Korol, Technical Director

Raeshon Lim, Managing Director

Akilan Arunachalam, Technical Director

WHAT IS BAJA?

Every year, Bruin Racing Baja SAE designs, manufactures, and competes a single-seat off-road vehicle. All of our members participate in every step of the design process, have hands-on experience with a wide variety of manufacturing methods, and learn engineering best practices to ensure each year's car is our best yet.



Our goal is to deliver **reliability** and **maneuverability** in harsh environments with a rugged suspension package, a custom-designed gearbox and differentials, and a rear-wheel cutting brake, and emphasize **innovative performance** with, among other features, a custom electromechanically-actuated continuously-variable transmission system.



OUR TEAM

(by the numbers)

80+
members and growing



37 **project engineers** responsible for individual components & processes

15 **majors** represented



6 **subteams** plus our Business team

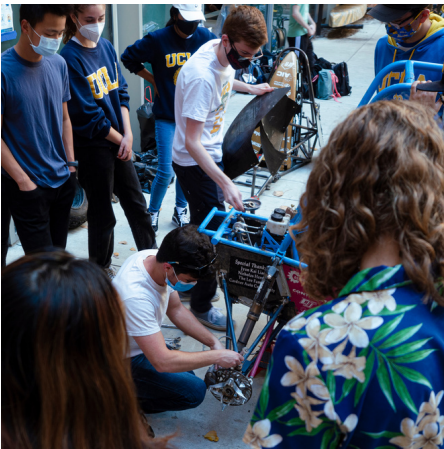
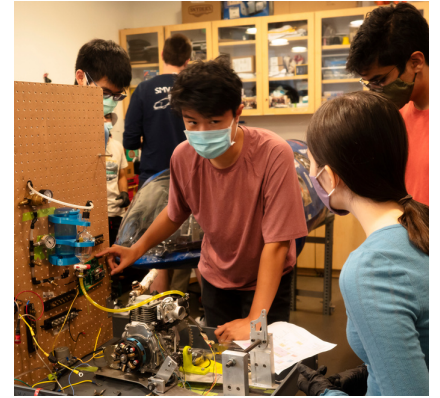
2 **competitions** in the 2023-24 season

1 **vehicle!**



TRAINING

We pride ourselves on having no barrier to entry. In collaboration with our sister Formula SAE and Supermileage teams, we help offer a vast collection of training programs and classes, geared towards design and manufacturing in a fast-paced automotive environment. *We do not charge any membership fees.*



New members are provided with the foundational skills required to succeed not only in Baja, but as a professional engineer as they continue to advance their career. *In 2022 alone, Bruin Racing trained:*

- **187** students in CAD (SOLIDWORKS)
- **141** students in machining
- **24** students in circuit design and construction
- **18** students in composites manufacturing

We also provide members with:

- Exclusive **company info-sessions** with sponsors
- **Resume workshops** and interview preparation
- Internship and full-time **job postings** from sponsors
- **1-on-1 career advice** from senior members



100% of Bruin Racing's graduates exit into a full-time industry position or a post-graduate program.

AMBITION

In Baja, all teams are provided with the same engine and rules, but there are few other restraints on creativity. **Innovation** characterizes the highest-achieving teams. We take this to heart, and strive to incorporate ambitious yet achievable features in all of our systems.

Chassis

2023 Achievements:

- Tube bending and notching done in-house for the first time in school history
- Dedicated aerodynamics research team

2024 Goals:

- Iterative, noise-reduced data acquisition to validate FEA simulations
- Reduce weight through shorter chassis

Transmission

2023 Achievements:

- Custom electromechanically-actuated continuously variable transmission
- Active impeller-based cooling system

2024 Goals:

- Maximize efficiency with improved actuator and belt-tensioning system
- Evaluation of optimal engine profile

Powertrain

2023 Achievements:

- Reduced center of gravity with optimized gearbox & centershaft placement
- Improved gear alignment for efficiency

2024 Goals:

- Implementing centerlock system to switch between rear and 4WD
- Reduce overall subsystem weight with improved FEA & validation testing

Suspension

2023 Achievements:

- Eliminated tensile failure on rear J-link tabs
- Increased rear linkage strength with hinge joints

2024 Goals:

- Implement long stroke coilovers to increase clearance and wheel travel
- Increase agility by optimizing suspension geometry

Driver Interface

2023 Achievements:

- Research-based ergonomics for better driver comfort and performance

2024 Goals:

- Reduce steering backlash with higher tolerancing and advanced parts
- Dedicated throttle team to ensure maximum engine output

Electronics

2023 Achievements:

- Custom PCB assembly for driving on-board electronics and transmission

2024 Goals:

- Actuator-based control system to maintain optimal transmission ratio
- Improved data acquisition (DAQ) infrastructure for validation

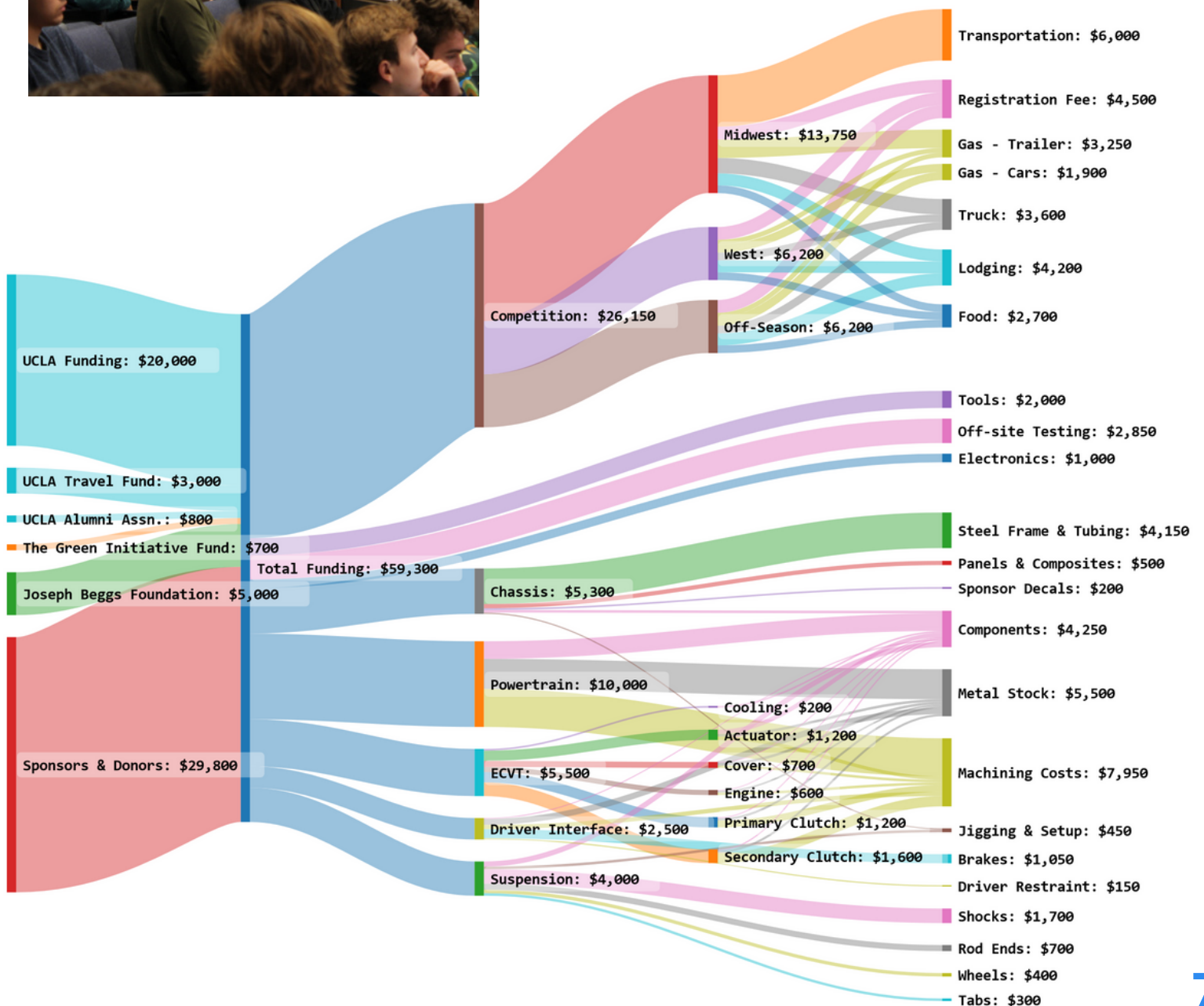
BUDGET & FINANCE

As part of emulating a professional engineering organization, we carefully program our budget, and factor cost into every decision we make.

We want you to know exactly what your support is going towards.

We encourage you to choose a subteam or item to sponsor!

Contacts and more detailed budgets are available upon request: email baja@bruinracing.org for more information.



SPONSORSHIP TIERS

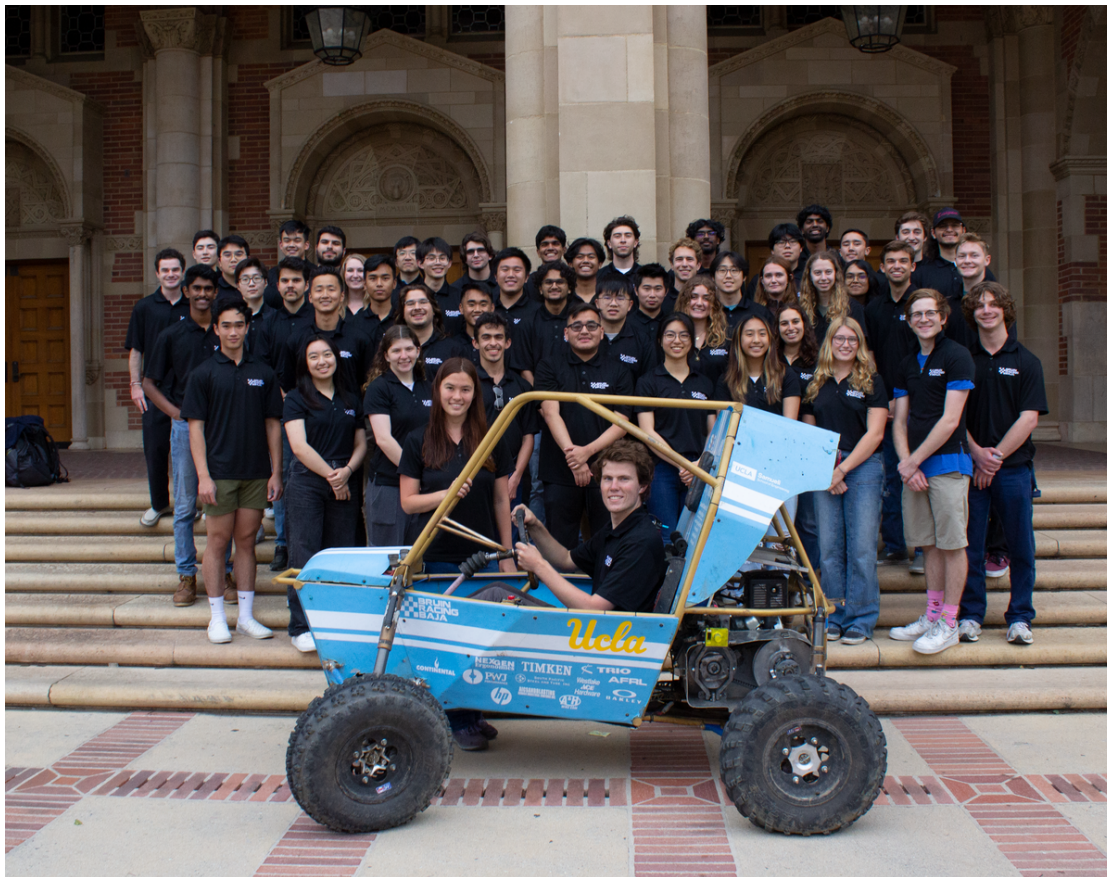
	Affiliate \$1,000+	Bronze \$2,500+	Silver \$5,000+	Blue & Gold \$10,000+
Logo on Website	✓	✓	✓	✓
Invitation to Dinner with Racing	✓	✓	✓	✓
Merchandise Package	✓	✓	✓	✓
Team Photograph	✓	✓	✓	✓
Resume Book		✓	✓	✓
Logo on Merchandise		✓	✓	✓
Recognition on Social Media		✓	✓	✓
Framed Poster of All Cars			✓	✓
On-Campus Infosession & Shop Tour			✓	✓
Decal on Team Trailer				✓
Tailored Baja SAE Appreciation Pack				✓

We also accept donations in-kind. Donations may be tax-deductible. If you have any questions, please reach out to baja@bruinracing.org.

THANK YOU

Thank you to our sponsors from the 2022-23 season!

We owe our success as a team to your generosity. Your donations have provided, and will continue to provide, technical education for dozens of future engineers, and we are honored to have your support.



Donate Now
Contact Us

Have any questions? Want to get involved? Follow up with your point of contact or email baja@bruinracing.org.



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