

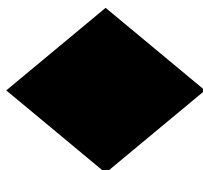


University of San Diego 2019 SAE Baja



Society of Automotive Engineers

University of San Diego
Student Chapter



SAE *International*[®]

The Team

University of San Diego's SAE Baja program is an interdisciplinary team consisting of mechanical, electrical, and industrial engineering students. In addition, we will enlist students from the University of San Diego's School of Business to manage finances and facilitate funding. For the third year in a row, our team will design, engineer, fabricate, test, and compete with an off-road vehicle in the 2019 SAE Collegiate Design Series. Last year's team found immense success by finishing 44th overall out of over 100 teams. This year's team aims to improve on the previous design by reducing excess weight, refining vehicle control, and improving overall durability. As a team, we intend on expanding this program to a school wide venture to provide practical learning experience. We are working day and night to make USD proud and cannot thank you enough for your support.



Competition Overview

SAE Baja consists of three regional competitions that test each team's vehicle design to the breaking point. Throughout the competition, our team will be judged on the creation of design specifications and the ability to meet those specifications, computer aided drafting, analysis, testing and development, manufacturability, serviceability, system integration and how well our vehicle performs dynamically. The 2019 west coast competition will be held in Gorman, California from May 16th to May 19th and the 2019 east coast competition will be held in Rochester, New York from June 6th to June 9th. The competition will host over 100 universities and consists of both static and dynamic events over a 3 day period.

Day 1—Static Evaluation

Teams must present their vehicle design to a panel of judges, giving justification for design choices. Cars are judged on a variety of aspects including suspension, powertrain, steering, driver and seat ergonomics, manufacturability and craftsmanship. A rigorous technical inspection is performed to ensure safety and compliance with all rules and regulations.

Day 2—Dynamic Evaluation

Cars are put through a series of events to evaluate the quality of each subsystem. These events are different for each competition but usually include the following: acceleration, hill climb, maneuverability, suspension and traction, sled pull and mud bog. Points are awarded for distance, speed or time, depending on the event.

Day 3—Endurance Race

The endurance race is considered the main event of competition. For four hours, all cars race wheel-to-wheel on a track riddled with obstacles including trees, jumps, logs, railroad ties, boulders, and ditches. The track is designed to push cars past their limit and it is extremely rare for any car to make it through the race without stopping for repairs. This event contributes forty percent of all points awarded throughout the competition.

Proposal

Our team of engineering students is determined to establish an excellent USD Baja team. In order to meet our goals and perform competitively we must raise \$30,000. Your financial support is needed! Below is an expected cost breakdown. We appreciate your interest in the University of San Diego's 2019 Baja team.

2016-2017 USD SAE Baja Competition Budget				
Category	Goals	Corresponding Items	Cost	
Frame	Light Weight	Tubing	\$ 3,000	
	Safe in rollover situations	Raw Materials		
	Stiff enough to maintain handling	Heat treating		
Powertrain	Low center of gravity	Engine	\$ 250	
	Maximum acceleration	Transmission	\$ 2,000	
	Reliable in extreme conditions	Extra Belt	\$ 60	
Drivetrain	Maximize traction without affecting handling Reliable	Differential	\$ 750	
		Gears & Chain	\$ 950	
Suspension	Long travel with minimized weight Minimize roll-over potential	Suspension Steel	\$ 500	
		Tube		
		Shock Absorbers		\$ 2,500
		Wheels & Tires		\$ 1,600
Steering	Tight turn radius Small steering ratio	Bearings & Bushings	\$ 750	
		Rack & Pinion	\$ 400	
Braking	Four wheel lock up on dry pavement	Steering Components	\$ 300	
		Master Cylinder	\$ 1,800	
Electronics	Data Acquisition Live telemetry Racing Radio System	Petal Package		
		Rotors & Calipers		
		Sensors	\$ 4,500	
Microprocessor				
Display & Controller				
Baja Vehicle Subtotal:			\$ 19,360	
Safety Equipment	Meet safety requirements in Baja SAE rules No rollovers No injuries	5 Point Harness	\$ 200	
		Wrist Restraints	\$ 100	
		Helmet	\$ 300	
		Fire Extinguisher	\$ 75	
		Foam Padding	\$ 100	
		Seat	\$ 500	
Safety Subtotal:			\$ 1275	

Marketing	Fundraising	Advertising	\$ 500
	Outreach/PR	Copies/Postage	\$ 100
	Establishment of Baja Club	Apparel with Logos	\$ 500
		Continuation Funds	\$ 1,000
Marketing Subtotal:			\$ 2,100
Competition	Baja SAE Competition in New York and California	Registration	\$ 1,250
		Travel Costs	\$ 3,500
		Hotel Rooms	\$ 3,000
Competition Subtotal:			\$ 7,750
Tools	Create proper inventory of tools needed for fabrication	Tube Bender Die	\$ 280
Tooling Subtotal:			\$ 280
Total Cost:			\$ 30,765

Sponsorship Levels and Benefits

Platinum Sponsors - \$10,000+

- ⇒ Large logo on Baja car
- ⇒ Link and logo on team website
- ⇒ Primary Logo on all team apparel
- ⇒ Sponsor mention in all publications
- ⇒ Car available for booking test drive
- ⇒ Membership in USD's President's Club*
- ⇒ Recognition plaque

Gold Sponsors - \$2500 to \$9,999

- ⇒ Large logo on Baja car
- ⇒ Link and logo on team website
- ⇒ Sponsor mention in all publications
- ⇒ Membership in USD's President's Club*
- ⇒ Recognition plaque
- ⇒ Logo on the back of team shirts

Silver Sponsors - \$1000 to \$2499

- ⇒ Medium logo on Baja car
- ⇒ Link and logo on team website
- ⇒ Logo on the back of team shirts
- ⇒ Sponsor mention in all publications
- ⇒ Membership in USD's President's Club*
- ⇒ Recognition plaque

**USD donors are invited to join the President's Club with an annual gift of \$1,500 or greater.*

Sponsorship Levels and Benefits (cont.)

Bronze Sponsors - \$250 to \$999

⇒ Small logo on Baja car

⇒ Recognition plaque

⇒ Link and logo on team website

Supporters - \$100 to \$249

⇒ Link and logo on team website

⇒ Recognition certificate

Thank You!

Can we count on you to join our Team?

Company Name: _____

Contact Name: _____

Pledged Amount: _____

Your contribution is tax deductible!

Potential 2018-2019 Sponsors,

Thank you for your time and support in advance. Your contribution will allow engineering students at the University of San Diego to learn through the best method: hands-on experience. Your sponsorship is vital to our success.

Sponsorship support can be sent via check or through our secure online portal.

To pay by check:

Please make your check out to University of San Diego, write “Baja competition” in the memo, and mail to:

Elisa Lurkis
Director of Development and Alumni Relations
Shiley-Marcos School of Engineering
University of San Diego
5998 Alcalá Park
San Diego, CA. 92110

elurkis@san Diego.edu
(619) 260-7913



To pay online:

Please click [here](#)* and select “Baja Car” from the drop-down menu.

CONTACT US:

We consider all of our supporters to be members of our team. If you would like to become a sponsor of our team, or have any questions, please contact any one of the following.

Engineering Advisor: **Steve Saxer**

Email: ssaxer@SanDiego.edu Phone: (619) 260-7860

Co-Team Captain: **Blake Dunkleberger**

Email: bdunkleberger@san Diego.edu Phone: (805) 624-0322

Fundraising Coordinator: **Molly McGarvey**

Email: mmcgarvey@san Diego.edu Phone: (858) 776-8071

**If the link does not work go to:*
<https://securelb.imodules.com/s/1374/giving/giving.aspx?sid=1374&gid=1&pgid=681&cid=1366>