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.

<table>
<thead>
<tr>
<th>Category</th>
<th>Goals</th>
<th>Corresponding Items</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame</td>
<td>Light Weight&lt;br&gt;Safe in rollover situations&lt;br&gt;Stiff enough to maintain handling</td>
<td>Tubing&lt;br&gt;Raw Materials&lt;br&gt;Heat treating</td>
<td>$3,000</td>
</tr>
<tr>
<td>Powertrain</td>
<td>Low center of gravity&lt;br&gt;Maximum acceleration&lt;br&gt;Reliable in extreme conditions</td>
<td>Engine&lt;br&gt;Transmission&lt;br&gt;Extra Belt</td>
<td>$2,060</td>
</tr>
<tr>
<td>Drivetrain</td>
<td>Maximize traction without affecting handling&lt;br&gt;Reliable</td>
<td>Differential&lt;br&gt;Gears &amp; Chain</td>
<td>$1,300</td>
</tr>
<tr>
<td>Suspension</td>
<td>Long travel with minimized weight&lt;br&gt;Minimize roll-over potential</td>
<td>Suspension Steel Tube&lt;br&gt;Shock Absorbers&lt;br&gt;Wheels &amp; Tires&lt;br&gt;Bearings &amp; Bushings</td>
<td>$4,250</td>
</tr>
<tr>
<td>Steering</td>
<td>Tight turn radius&lt;br&gt;Small steering ratio</td>
<td>Rack &amp; Pinion&lt;br&gt;Steering Components</td>
<td>$700</td>
</tr>
<tr>
<td>Braking</td>
<td>Four wheel lock up on dry pavement</td>
<td>Master Cylinder&lt;br&gt;Petal Package&lt;br&gt;Rotors &amp; Calipers</td>
<td>$1,800</td>
</tr>
<tr>
<td>Electronics</td>
<td>Data Acquisition&lt;br&gt;Live telemetry&lt;br&gt;Racing Radio System</td>
<td>Sensors&lt;br&gt;Microprocessor&lt;br&gt;Display &amp; Controller</td>
<td>$4,500</td>
</tr>
<tr>
<td>Safety Equipment</td>
<td>Meet safety requirements in Baja SAE rules&lt;br&gt;No rollovers&lt;br&gt;No injuries</td>
<td>5 Point Harness&lt;br&gt;Wrist Restraints&lt;br&gt;Helmet&lt;br&gt;Fire Extinguisher&lt;br&gt;Foam Padding&lt;br&gt;Seat</td>
<td>$950</td>
</tr>
</tbody>
</table>

**Baja Vehicle Subtotal:** $19,360

**Safety Subtotal:** $1,275
| 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 |

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**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
⇒ Link and logo on team website
⇒ Recognition plaque

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 Alcala Park  
San Diego, CA. 92110

elurkis@sandiego.edu  
(619) 260-7913

**To pay online:**

Please click [here*](https://securelb.imodules.com/s/1374/giving/giving.aspx?sid=1374&gid=1&pgid=681&cid=1366) 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@sandiego.edu  
Phone: (805) 624-0322

**Fundraising Coordinator: Molly McGarvey**  
Email: mmcgarvey@sandiego.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*