

IOWA

Baja



Trip to the Society of Automotive Engineers Collegiate Baja Competition in Gorman, CA

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This year, Iowa Baja traveled nearly 2000 miles to compete in the 2019 Baja SAE Collegiate Design Series Nationals Competition in Gorman, CA. Baja SAE is an intercollegiate design competition put on every year by the Society of Automotive Engineers where Students from universities all over the world design and build off-road vehicles capable of traversing difficult obstacles on tracks specifically designed to test their cars. SAE Baja Nationals are divided into two types of events, static events and dynamic events. Static Events include the Cost Report and Cost Audit, Design and Sales Presentations, and are meant to test the car's build quality, projected market potential, and cost-effectiveness. After these, the teams compete in the Dynamic Events, which test the performance capabilities of their vehicle. Events include Acceleration, Maneuverability, Hill Climb, and Suspension & Traction, with the first three intended to be tests of the performance, and the last intended, to put it lightly, to break your car. While most teams finish Acceleration, Maneuverability and get some distance on the hill climb, most teams don't even finish Suspension and Traction. Once all 100 cars in the competition, one from each attending school, complete these events, they are scored, and that determines the staging for the final event: a 4-hour Endurance race, which tests both the durability of vehicles and the skill of their driver.

The 2018-2019 season will go down as the best in history for Iowa Baja (so far). After 4 hours, Car 51, Nighthawk, finished 5th in the 4-hour Endurance race (a team best for Iowa), placing alongside some of the top cars in the nations from teams like Cornell, University of Michigan, and University of Akron (teams with historically astronomical budgets). Overall, we scored 14th place, another best for the University of Iowa. However, our impressive finish is not

our only proud accomplishment this year. The 2018-19 car will also be known as one of the most diverse years in the history of Iowa Baja. While normally built by a few senior members, this year's car was designed by a group of more than 20 members from every year and experience level. Our Nationals Team also included 5 women and a various assortment of majors outside of the engineering field, the most The University of Iowa has ever sent to a Baja race. Abby Denson, a Nursing major, Kristen Berg, a Radiology major, and Paulina Krocak, a Mechanical Engineering major, led our Brake Design Team for NightHawk. Paulina, Abby, and Kristen spent the past year working with industry professionals to design, fabricate, and test the braking system for the NightHawk. At nationals, before a car is allowed to even move under its own power, it is required to pass a Brake Check event where all four tires have to lock when the brakes are applied after the car drives a set distance, usually around 150 ft. This year was the first year in Iowa Baja's history that it worked flawlessly the first time, saving us countless stressful hours of fiddling with braking systems to get it to work. Our Cost Report and following Audit were led by Kayla Denson, who impressed the judges with our honest reporting and cost-effective design methods; one of the judges commented that Iowa Baja's report "was by far the most detailed he'd seen from any team in a Baja competition" and that he struggled to "find anything wrong with the report". With her guidance, we were able to build one of the most cost-effective vehicles on display. Finally, all media from the event was captured, edited and produced by our Social Media Coordinator, Kaitlin Reither, a Biomedical Engineering Major, and Pierce Knarr, a freshman Mechanical Engineering Major.

While Iowa Baja competed in California against other teams, true to the stereotype of being “Iowa Nice” we also helped to support other Baja teams we competed against. Teams from other schools, like The University of Michigan – Ann Arbor, Rochester Institute of Technology, Arizona State University, and Ecole de Technologie Superieure were able to utilize our tools and material, all teams that due to our help were able to compete in the competition and ultimately score higher than us overall.

Baja SAE Nationals is also a great networking event for our team. By the end of Nationals, the 3 who had graduated before nationals, were able to find full-time engineering positions. During Nationals, companies like Volvo Trucks & Cummins stopped by to introduce themselves to the members of the team and meet with a few members. Northrop Grumman also stopped by to speak with each of our members individually. Engineers on our team made a powerful impression on the Northrop team. Later in the event, we were sought out in the paddocks during and after the event so the Northrop team could network and learn more about our members.

This season would not have been possible without the generous help from our sponsors. Over the 2018-19 season, they contributed both time, tooling, and insight to help us achieve this unbelievable finish this year. If you would like to become a Baja sponsor, visit our website for more information. However, we are just getting started. The 2019-2020 Season has just begun, and we are excited for what lies ahead. Follow our Baja Social Media on Facebook,

Twitter, Instagram & YouTube to stay updated on all things Baja. In addition to our social media, check out our periodically posted BajaNOWs. They are a great place to see behind the scenes footage on how we build cars, market the team as well as hear directly from the team on what it takes to be in Baja! Go Baja!

