

# UMSAE

SPONSORSHIP PACKAGE



# SPONSORSHIP LEVELS



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	DIAMOND	TITANIUM	PLATINUM	GOLD	SILVER	BRONZE	SOFTWARE TIER
<b>WEBSITE RECOGNITION</b>	special	large - color	large	medium	small	sponsor page	medium + link
<b>SOCIAL MEDIA POST RECOGNITION</b>	yes	yes	yes	yes	yes	yes	yes
<b>T-SHIRT RECOGNITION</b>	front	large	medium	small	name	name	medium
<b>RACECAR + AIRCRAFT RECOGNITION</b>	special	large	medium	small	small	name	small
<b>TRAILER RECOGNITION</b>	special	large	large	medium	medium	-	medium
<b>POLO SHIRT RECOGNITION</b>	front	sleeve	top back	middle back	-	-	lower back
<b>SPONSORSHIP TOUR</b>		available to top five donors			-	-	-
<b>COMPANY EVENT PRESENCE</b>		upon request		-	-	-	-

# AERO

The objective of the Aero Design Competition is to design a heavy lift RC aircraft that replicates a full-scale airliner. A new rule set was issued for the 2019-2020 competition year where points are awarded based on the amount of cargo lifted, which is represented by soccer balls and payload. In order to succeed in this design challenge, the team must balance the reliability of their aircraft against its lifting capacity in order to complete the multiple flights performed at the competition.

Additional limitations on maximum power, wingspan, and takeoff distance force the team to think critically when designing the aircraft and anticipating its maximum payload. The team performs aerodynamic and structural analyses, using computational tools, materials testing, and the wind tunnel.



Last year, UMSAE Aero placed first overall in a field of 43 competitors from universities all over the world. UMSAE Aero has maintained the #1 spot in the Aero Design East competition for the past two years and aims to replicate this performance with the new rule set.



# AERO<sup>MICRO</sup>

The Micro Aero team is the newest member of the UMSAE family, having been established in 2015 with an objective of designing a lightweight UAV capable of maximizing payload carried and minimizing the empty aircraft weight. The four major components to determine the team's total score is the design report, design presentation, flight score, and assembly demonstration.

The payload for the aircraft is Schedule 40 two-inch PVC pipe. The aircraft must also be able to be fully disassembled and packed inside a dimensionally constrained container. The team uses computational tools and conducts testing to determine the overall size of the aircraft and interfacing components for assembly.



Last year, the Micro Aero team placed 10th place overall and aims to place in the top three this year. This year, heavy emphasis is placed on assembly and maximizing payload carrying capacity.

# FORMULA

Originating in 1986, the Formula division of Polar Bear Racing annually designs, manufactures, tests and races an open-wheeled, combustion engine racecar. The car is designed in accordance to regulations published by SAE International and competes in five dynamic events: acceleration, skid pad, autocross, fuel efficiency, and endurance.

The Formula Team consists of approximately 55 members who are responsible for the entire design and construction of the vehicle. Due to the complexity of the vehicle, members are exposed to a wide assortment of engineering challenges, from aerodynamic design to engine mapping. Using tools such as CAD and FEA, members can gain valuable experience and prepare themselves for successful engineering careers.



Every year, the Formula Team travels to two competitions, one at the Michigan International Speedway, and the second in California with the Electric Team. Attracting teams from across Europe, Asia, and South America to compete against the top teams of North America, these competitions present a unique opportunity to represent Manitoba on a global scale.

In 2015, the Formula Team placed 10th out of 75 teams at FSAE Lincoln, and the team continues to use this placement as a minimum performance benchmark. This season we are focused on improving upon last year's design to create a better, faster, and more competitive vehicle through increased data analysis and testing.



# ELECTRIC

The Formula Electric Team was formed in 2011 with the introduction of the electric class to the existing Formula SAE competitions. Just like the UMSAE Formula team, Formula Electric annually designs, and manufactures an open-wheeled racecar, but with an all-electric drive train. After a scrupulous technical inspection, the electric vehicle is run through events in acceleration, suspension, handling, and endurance.

The opportunity to be part of an innovative electric vehicle project has caught the attention of a large number of engineering students from all disciplines. The team has grown to over 70 students and is the most diverse UMSAE team in term of involvement of different engineering disciplines. As a part of Formula Electric, students have the unique opportunity to develop real life experience with electric motors, power management, app development, and electromechanical design.



Every June, Formula Electric has competed in Lincoln, Nebraska, in SAE's collegiate design series Electric competition. The Formula Electric team placed within the top 10 in the 2018 Electric competition. Each year, we strive to improve our designs iteratively, or with brand new concepts, including improvements in manufacturing processes, better reliability, a new driver interface, and improved data logging and monitoring.



# BAJA

The UMSAE Baja team designs and builds a single-seat off-road vehicle every academic year to compete in an international competition hosted by SAE International. The competition consists of 2 static and 5 dynamic events, comprising of: the sales presentation, the design presentation, acceleration, hill climb, maneuverability, suspension & traction, and a four-hour endurance race. The Baja team functions to design, manufacture, test, and promote the vehicle as a prototype for a production off-road vehicle.

The dynamic competition events subject the Baja vehicle to rough, muddy terrain and difficult obstacles. The Baja team must design a vehicle that is robust and rugged but still able to maintain a competitive speed.



During the design phase, each engineering student must try to balance trade-offs in areas such as lightweight design vs. durability, or top speed vs. low end torque, while keeping manufacturability and serviceability as key foundations of their designs. With most of the design and building done in-house, we are able to keep these attributes at the forefront of our work.

Like any major project, the team is limited by time, money, and manpower, especially during the school year. Despite these constraints, the team is competitive every year, striving to improve performance, design, and manufacturing, thanks to the support of great sponsors like you!

# WHO WE ARE

The University of Manitoba Society of Automotive Engineers, better known as UMSAE, is a non-profit student organization made up of 5 distinct teams. We develop our professionalism, project management & design skills through creating vehicles to compete in international competitions.

With roots going back as far as the Mini-Indy SAE competitions in the 1980's, UMSAE has given countless students the opportunity to apply their education to real world challenges, and to represent Manitoba on a global scale.

We are one of the largest collegiate chapters of SAE International in the world, comprising of between 200-250 members across our Aero, Baja, Formula, Formula Electric and Micro Aero teams.



# UMSAE OUTREACH

In 2018, we kickstarted a new initiative for our organization in the form of the A World In Motion (AWIM) Learn Twice program, run by SAE International. AWIM gives our students the opportunity to give back to local communities while also benefiting our organization and engaging our membership.

UMSAE members mentored and instructed primary school students in STEM programs involving hands-on learning experiences. Our ambitions for 2019 include expanding the program to include more instructional sessions and reaching more schools and age groups.





# WHY SPONSOR UMSAE?

Sponsorship is essential for the success of UMSAE and its various design teams. Both monetary and material contributions are vital to the operation of this non-profit student organization. UMSAE therefore strives to assure our sponsors promotional needs are met and can see the results of their contributions. There are plenty of excellent reasons to sponsor UMSAE, and since we are a non-profit organization, all of the funds contribute towards improving our facilities, purchasing materials, and fabricating parts.

- Funding our projects helps us build upon our practical engineering work experience, developing students beyond what is capable in the classroom alone. You are investing in the future of engineering!
- Sponsors help develop a network of highly capable engineering students interacting with industry contacts, giving their companies excellent future hiring potential.
- Brands promoted on our vehicles are represented on a global stage when our teams travel to SAE's international competitions.



## **HOW TO SPONSOR UMSAE**

For more information on our sponsorship program, visit

[www.umsae.com/contact](http://www.umsae.com/contact)

You can also reach out to our Sponsorship Executive at

[sponsorship@umsae.com](mailto:sponsorship@umsae.com)

**WE LOOK FORWARD TO  
HEARING FROM YOU!**