UBC SUPERMILEAGE TEAM

SPONSORSHIP PACKAGE 2014

Contact Us at **SPONSOR@SUPERMILEAGE.CA**
for any questions or additional information.

UBC Supermileage Team

The UBC Supermileage Team is a group of 65 dedicated engineering students working to design and build fuel efficient, gasoline-powered vehicles for the Shell Eco-Marathon Americas and the Society of Automotive Engineers (SAE) Supermileage competitions. Our diverse team includes students from mechanical, geological, civil and materials engineering as well as engineering physics. Within this sponsorship package, you will be able to find the following:

- **A Message from the Captain**
- **Competition Descriptions**
- **Past Achievements**
- **Overview of Vehicle Designs**
- **Our Goals for this Year**
- **How You Can Support Us**

The Pursuit of Efficiency

Since 2001, our team has designed and built multiple super-mileage vehicles and has achieved fuel mileages of up to 3145 mpg (1337km/L). We are passionate about effecting positive change on the environment with our engineering education and have actively participated in community and professional events to raise awareness for sustainable transportation. With a proven track record of continuous success, we are looking to grow our industry relations and further improve on our competition performances!

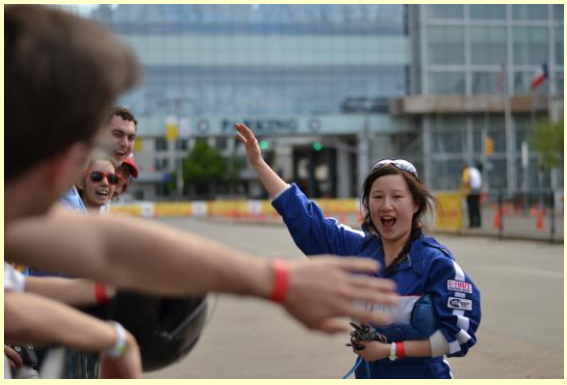
Why We Need You!

As a student design team, we rely heavily on the support and funding of local community and industry partners. Your support gives us the opportunity to practice engineering outside the classroom and grow as young professionals. Specifically, your contribution allows us to purchase material and equipment for the design and development of our vehicles.

CRATE INCIDENT, May 2014 - While returning from Houston, Texas this past May, the shipping truck containing our competition crate was involved in a highway accident. Both vehicles as well as many of our tools and valuable team resources were destroyed. In order to recover from the damages, the team will require extra support from the community and industry this year to achieve our goals and re-design and construct both competition vehicles

MESSAGE FROM THE CAPTAIN

Thank you for your interest in the UBC Supermileage team! I am a fourth year Mechanical Engineering student in the Mechatronics option and have been a member of the team for the past three and a half years. As a competitive person and hands on learner who joined engineering to help society, I was quickly drawn to the Supermileage team. As one of the most successful student teams at UBC, with an impressive track record and over 60 members from diverse programs, the team offers students a space to apply classroom theory to a very real problem. Sustainable transportation is an important global issue and we are passionate about working towards the solution in our pursuit of efficiency. I'm always struck by the impact the team has on its members and the public. Our members are motivated, welcoming and inventive, pushing new boundaries each year and always eager to learn more.



As captain, I want to maintain our reputation as one of the top teams at competition while promoting sustainability and student development. Our goals this year are to continue the last two years of podium finishes with the Urban Concept, hold and attend as many public events as possible, and maintain our welcoming and learning focused team culture. We aim to rebuild both vehicles this year for the Shell Eco-Marathon, with a two year development focus on the prototype vehicle, allowing expansion into the SAE competition next year and new engineering challenges for our team. However, with the loss of our crate this summer, there is a heavy strain on our budget. We welcome any contributions or partnerships and are greatly appreciative of our sponsors. Your partnership supports students who want to go above and beyond the classroom learning experience and create lasting change.

Thank you,

Katelyn Currie

2014-2015 UBC Supermileage Team Captain

THE COMPETITIONS

The UBC Supermileage Team has competed internationally at the Shell Eco-Marathon Americas and the Society of Automotive Engineers Supermileage competition. Both competitions challenge teams to design, construct, and test cutting-edge, energy efficient vehicles.

COMPETITION JOURNEY

Starting in 2001, the team competed in the SAE Supermileage Competition with the "Mark" series of Prototype class vehicles. From 2003 to 2006, the team dominated the podium with first place finishes and then set its sights on the more comprehensive Shell Eco-Marathon Americas (SEMA) Urban Concept challenge. In 2010, the team debuted in the Urban Concept class and, despite not completing a full run, the vehicle achieved an impressive fuel mileage. Since then, the team has iteratively improved the Urban Concept design to achieve consistent podium finishes. In 2013, the team decided to revive the development of prototype vehicles as well as continue development of the team`s Urban Concept vehicle to allow more learning opportunities for team members. Upon competing in both vehicles classes in the SEMA competition, the team finished in 2nd and 5th place. Last year, the team continued to compete in both vehicle classes. Due to technical challenges faced at competition, the team was not able to acquire a valid score for Mark XI but finished 3rd with Odysseus.

	Date	Result	Mileage
URBAN CONCEPT	2014	3rd Place	0.722L/100km (326 mpg)
	2013	2nd Place	0.408L/100km (577 mpg)
	2012	3rd Place	0.817L/100km (288 mpg)
	2011	4th Place	1.099L/100km (214 mpg)
	2010	DQ	1.438L/100km (163.5 mpg)
PROTOTYPE	2014	DNF	-
	2013	5th Place	0.170L/100km (1383 mpg)
	2008	4th Place	0.126L/100km (1865 mpg)
	2006	1st Place	0.075L/100km (3145 mpg)
	2005	1st Place	0.147L/100km (1608 mpg)
	2004	1st Place	0.135L/100km (1747 mpg)
	2003	1st Place	0.254L/100km (927 mpg)
	2002	4th Place	0.263L/100km (895 mpg)
	2001	9th Place	0.797L/100km (295 mpg)

SHELL ECO-MARATHON AMERICAS COMPETITION is open to student teams from across North and South America. It comprises both Prototype and Urban Concept class vehicles and multiple energy sources.

SAE SUPERMILEAGE COMPETITION is open to student teams from across North America with gasoline powered Prototype class vehicles.

URBAN CONCEPT class vehicles challenge students to create cars that more closely resemble real-life automobiles in appearance and functionality.

PROTOTYPE class vehicles encourage students to create a futuristic vehicle that maximizes fuel mileage with minimal design constraints.

OUR GOALS

Since the crate incident this last May, the team has been more determined than ever to design and rebuild our competition vehicles. The team is focused on the following goals this year.

PURSUIT OF EFFICIENCY

DESIGN AND BUILD TWO COMPETITIVE VEHICLES FROM GROUND UP – The UBC Supermileage Team has innovative vehicle designs and construction techniques that have made the team highly competitive. This year, even though the team will be starting from scratch, we are aiming to produce highly competitive vehicles with the ultimate goal of podium finishes in both vehicle classes.

The team is also preparing for a second competition, SAE Supermileage 2016, by developing a new engine and prototype shell this year. Postponing attendance of the additional event until 2016, due to current financial constraints, allows a full year of development to better implement past research and competition experience.

EDUCATION

CREATE MORE WELL ROUNDED ENGINEERS – The UBC Supermileage Team provides an inclusive environment for learning outside of the classroom. Junior members are trained and mentored by senior member in different areas of vehicle design and development. The team's growing internal training sessions include CAD modeling tutorials, carbon fiber layup demonstration, and wind tunnel tests. Team members are not only exposed to learning in the technical areas, but also in teamwork, project management and professional development.

RAISE AWARNESS

Sustainability is an increasingly pressing issue in today's society. The UBC Supermileage Team is passionate about creating sustainable transportation and wants to contribute by raising awareness about energy conservation. The team intends to organize and attend as many campus and community events throughout the year as possible to promote project and environmental issues.

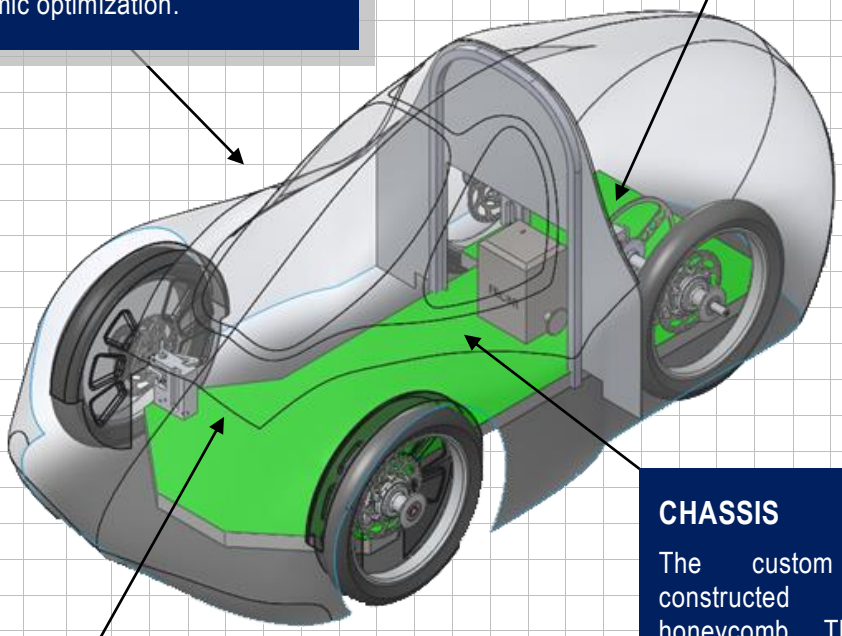
URBAN CONCEPT CLASS: ODYSSEUS

ENGINE

The car uses a 50cc Honda GXH50 motor that, if left stock, has 2.1 hp. The stock carburetor has been replaced with a custom electronic fuel injection system to allow for engine tuning and increased fuel efficiency.

BODY

Made of carbon fiber, the body is designed with CAD, and tested extensively using CFD software and scale models in the wind tunnel for aerodynamic optimization.



CHASSIS

The custom chassis is constructed from Nomex honeycomb. This non-metallic composite material is used extensively in aircraft construction. It is extremely lightweight and has a high strength to weight ratio, making the chassis both light and stiff.

STEERING

All components in the steering system are custom designed and fabricated to be as lightweight as possible. On the rare occasions when the brakes are applied, we use hydraulic brake calipers from mountain bikes with custom made rotors to fit our custom wheels.

Drawn by	UBC Supermileage Team	Page 1 of 1	
Title	Urban Concept Class: Odysseus	Rev	1.0
File Name	Sponsorship Package	Date	July 18, 2014

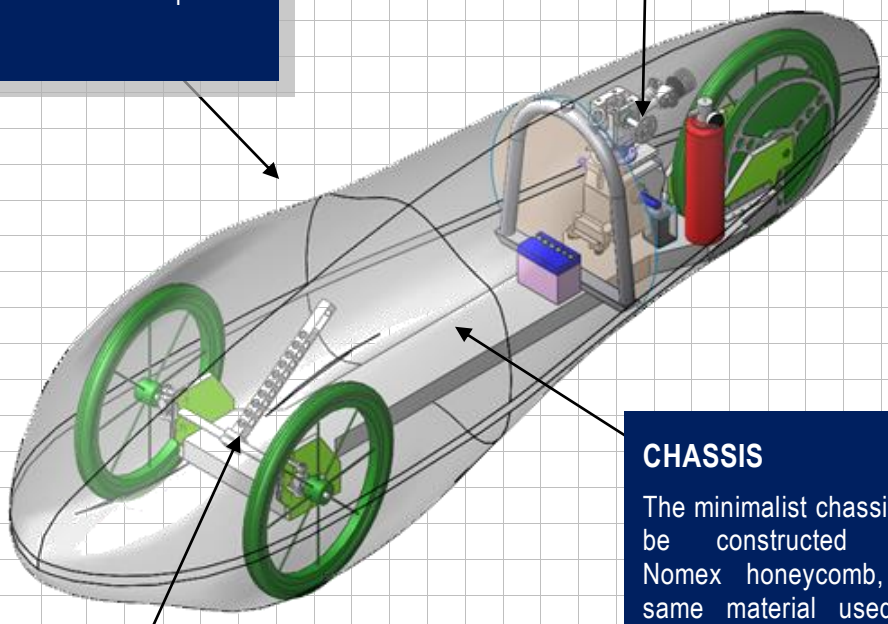
PROTOTYPE CLASS: MARK IX

BODY

Carbon fiber is used for the construction of the Mark IX shell. This ultra-light material allows us to form the intricate curves that give our vehicle its distinctive shape.

ENGINE

The same model of 50cc Honda engine is used in the Mark IX as in the Odysseus. A custom engine tune is created to take advantage of the vehicle's lower weight and superior aerodynamics.



CHASSIS

The minimalist chassis will be constructed from Nomex honeycomb, the same material used on Odysseus. It is extremely lightweight with a high strength to weight ratio, allowing the chassis footprint to be very small.

STEERING

Water jet aluminum and plastic components keep the steering system extremely light weight and precise. Simple mechanical disc brakes normally installed on bicycles are used with steel rotors on wheels spoked to wheelchair hubs.

Drawn by	UBC Supermileage Team	Page 1 of 1	
Title	Prototype Class: Mark IX	Rev	1.0
File Name	Sponsorship Package	Date	July 18, 2014

WHY GET INVOLVED?

We are hoping to develop relationships with industry organizations interested in offering their support. Partnering with us provides several benefits.

CAREER RECRUITMENT

The UBC Supermileage team consists of engineering students who demonstrate a passion for engineering design by taking initiative outside the classroom. Sponsorsing and meeting the team is a good opportunity to recruit engineering students who have already demonstrated commitment, professionalism and willingness to learn.

MEDIA COVERAGE

Every year UBC Supermileage partakes in media events that allow the team to be featured on newspapers and broadcasts. Last year, the team was covered in three episodes of a Global TV Series show in addition to being featured in local newspapers. Below are some highlights of the team's past media coverage.

TIME

"…you don't really need funky alternative fuels or an electric motor to trim your energy consumption on the road. Sometimes all it takes is a little ingenuity." **– Time Magazine's Greatest Invention of 2006**

Discovery CHANNEL Daily Planet

"What do you get when you challenge a bunch of engineering student to build a green car. At the University of British Columbia you get … [a] three wheeler that can travel 3145 miles on a single gallon of gas." **– Daily Planet**

THE VANCOUVER SUN

"…a group of University of B.C. engineering students has designed a vehicle that will run from Vancouver to Halifax on $5 worth of gas and fumes." **– The Vancouver Sun**

SPONSORSHIP LEVELS

UBC Supermileage Team enjoys partnerships with many companies every year. With the support of sponsors such as you, we are confident that we can achieve our goals this year and remain a highly competitive and impactful team.

Both monetary and non-monetary sponsorships, including technical support, are recognized annually and are greatly appreciated by the team. Each sponsor, regardless of status, will receive monthly email updates from the team and will have the opportunity to meet with team members and tour the team's workshop. Sponsorship status is detailed below but we are happy to discuss other partnership arrangements. For more information please contact us at sponsor@supermileage.ca

GOLD ($5000 OR MORE)

Gold sponsors will have a large logo displayed in a dominant position on both competition vehicles. Also, the logo of your business will be featured on the team's web page and promotional materials.

SILVER ($1000-$4999)

Silver sponsors will have a medium-sized logo displayed with preferential placement on both competition vehicles. Also, the logo of your business will be featured on the team's web page and promotional materials

BRONZE (LESS THAN $1000)

Bronze sponsors will have logo displayed on one competition vehicle, or both if space allows, team's web page and promotional materials

IN-KIND (NON-MONETARY SUPPORT/DONATION)

In-kind sponsors will be given a gold, silver, or bronze status based on contribution. The team values non-monetary support such as technical expertise, facility rentals, material donations and equipment donations. Other sponsorship arrangements can be discussed. Details of each sponsorship will be discussed on an individual basis.

2013-2014 SPONSORS

Professional Activities Fund
Shell Engineering Fund