The design semester is over, and with it ends the period of time when our new members become acclimated to our program. We’re ecstatic to say that our team has expanded drastically with a wave of new talent. This is the largest Warrior Racing team in the history of the program! We began this season with the intent to shatter records, and halfway through we’ve already taken one down!

Special thanks to all of our returning members who focused on recruiting and working with these new students on their preliminary assignments. And thanks and congrats to all of our new members who put in the hours, learned the skills, and developed their role on Warrior Racing! The full roster of our team can be found on the following page.

Not Pictured
- Returning - Brandon Horsch (Frame Captain)
- New Member - Madison Horsch
  Madeline Betterly
  Jesse Dye
Members of our team are hard at work fabricating the components for the program’s 9th vehicle. Returning leaders are teaching members how to safely and efficiently manufacture quality parts. These skills are invaluable, as they allow our students the opportunity to bring their designs to life. It takes a lot of knowledge and patience to design the car, and sometimes even more to manufacture it. So they’ll learn about the different tools and techniques that will result in perfect products. Thankfully we’re making great progress, and taking any hiccups in stride. Several systems are almost ready for assembly and testing, and our bodywork is underway. We’re just waiting on a few pieces of the frame to be done in order to check it off the to do list!

We’d like to thank our sponsors who assist us with manufacturing our projects. From donating tools to providing material to cutting out components; your contributions play a crucial role in the car’s completion. A special thanks to Grizzlies Racing from Oakland University. They were kind enough to help knock out multiple components for our Chassis division. Be sure to check out their progress and success at grizzliesracing.com.
Our team members work on the team as an extracurricular activity to gain invaluable engineering experience. Recently, our program has been able to tie some of our hard work in our course credits. Last semester our Business Director worked with other WSU students to rebuild Road Warrior 7’s brake system to earn credits for ME Senior Design II (ME4500). It was a unique experience, as a subsystem was being redesigned on an existing car by a group which had several individuals who weren’t part of SAE. At the end of the semester, the brakes were fully operational. The group members walked away with a plethora of new experience, from team management skills to the design process.

At the same time, our Chassis & Powertrain Directors were enrolled in ME 4300, Thermal Fluid Design. Over the course of the semester their work focused on the concepts and properties of a Formula SAE Induction system. The primary component investigated was the intake. Although there was no manufacturing involved for this course, plenty of theoretical data was acquired that will benefit our students during the design process.

Moving into the Winter 2015 semester, our program has set up multiple opportunities to tie into course credit. Members from our team are working on a pneumatic shifters project for the Road Warrior series in ME4500. Others are studying suspension bell cranks in ME3450, Manufacturing Processes. Our students are grateful to have these opportunities to tie in our Formula SAE experience with our curriculum.
Preparing the Fleet

Road Warrior 9’s success is the main focus of this season. But we can’t help ourselves from working on our previous models, especially with how many members we have on our team. It’s a unique learning experience rebuilding each car, since they all have drastically different needs. RW6 looks like it has a long way to go on the surface, as its commonly found as a green frame. However most of the car’s parts are still around and just need to be assembled. Some of these components had transferred between models for emergency repairs or design studies. The lessons to be learned rebuilding this car come from analyzing the effects of years of testing and active use. How do these 4+ year old designs and parts hold up against our newer racers? What has changed over the last models and what were the outcomes? We’ll hopefully be answering these questions soon.

RW7 catches the eye, and its sleek bodywork doesn’t show its age. It is the team’s last two-season car, as it competed at both Formula West and Formula Michigan. RW7 was commonly found on display as the team worked on RW8, and unfortunately its subsystems were not de-bugged as much as they could have been as the team’s focus needed to be on RW8. That means RW7 is still in need of some design validation, which is difficult since many of its creators have passed through our program. Some of the systems, like the brakes, needed a redesign in order to keep the car functional. There’s several subsystems left that still need a little tweaking or reassembling, but RW7 will be hitting the pavement for testing alongside our other Road Warriors.

That leaves RW8, our pride and joy. The car looks as if it has been tested everyday since it touched the ground, and that’s exactly what we’ve done with it. RW8 has earned its battle scars and all of its major issues have been flushed out. We can take that car out of our shop at any given moment and know it will run perfectly for the whole day. All that’s needed is a couple replacement parts to fix RW8 from our last day of testing. And after all the hard driving we’ve put it through, we may even throw on a new coat of paint before it hits the road again.

But at the end of the day, we’re making sure our resources are focused on building and testing RW9. As sad as it may be, a car may not be brought back to life if a needed component is required to make RW9 perform. But rest assured we never give up at Warrior Racing, so we’ll do what it takes to keep the fleet primed and ready for action! More cars result in more valuable engineering experience!
2015 North American International Auto Show!

We hope everyone had a chance to visit the Detroit Auto Show this past month. There were plenty of awesome cars that we definitely put on our wish list. Our team had a great time meeting and greeting with everyone who stopped by our booth. From previous SAE members sharing stories to people blown away by the fact that students build the cars, fun was had by all. Our Business Executives also had a great time walking the show at the Charity Preview. Running into our friends from Oakland University’s SAE program and enjoying the night with them was a pleasant surprise!

For our program, attending this event is invaluable for a multitude of reasons. And all of this was made possible by the generous support of the North American International Auto Show! Thanks for sponsoring our team once again!
Game Night / Hunger Drive #2

During the busy manufacturing semester, our team took a quick break to help some local organizations fight hunger. We hosted another game night to raise money for Doenation Ministries and food for Gleaners Food Bank. We’re delighted to say this event was just as successful as the first! At the end of the night we made a healthy donation to Doenation Ministries and filled two boxes with food to give to Gleaners.

Having fun playing games and taking a break from everything going on is just a bonus. Congrats to our tournament champions:

Super Smash Bros (2 v 2)
1st Place - Adam Niner & Patrick Gyetvay
2nd Place - Stefan Arambasich & Jake Lefebvre
3rd Place - Brandon Horsch & Jesse Dye

Just Dance (1 v 1)
1st Place - Madison Horsch
2nd Place - Kristina Vujic
3rd Place - Sid Patel

Mario Kart (Free for All)
1st Place - Jake Lefebvre
2nd Place - Sid Patel
3rd Place - Jesse Dye
4th Place - Justin Bekker

Special thanks to WSU’s Blimpies for supporting our program with some discounted party subs. They’re the best! To learn more about the programs we support, check out their websites!

www.doenationministries.org/about-1.html
www.gcfb.org/site/PageServer
www.blimpie.com  zip code (48201)
Thanks to our current sponsor Arch Global Precision for donating some awesome KEO Cutter sets! We’re excited to say Arch Global Precision is now one of our Belle Isle Sponsors!

www.archglobalprecision.com

Thanks to our sponsor Brembo for helping us out with our brake equipment. We now have new master cylinders and sets of calipers! Our team’s looking forward to installing them on RW9.

www.brembo.com
Warrior Racing is excited to welcome back our Detroit Legacy Sponsor, Huntsman! They provided our team with additional tooling board! This material will be used to create molds for RW-9's bodywork. We can't thank Huntsman enough for this generous support!
Thanks to our returning sponsor Airtech for providing us with a variety of material that we will use for our carbon fiber lay up!

Thanks to our new sponsor Peerless Steel for donating a healthy supply of stock aluminum. It goes without saying we'll need this material to manufacture all of our car's components!
www.edwardwduffy.com

Thanks to our new sponsor Edward W Duffy & Company for providing our team with material for our frame and suspension components! RW-9's Chassis wouldn’t be possible without their support!

www.clintonaluminum.com

Thanks to our new sponsor Clinton Aluminum for sponsoring us with additional aluminum stock! We’ve got a lot of components to manufacture, so this donation came at the perfect time!
Thanks to our sponsor Embroidme for helping us out with some awe-some work shirts! They're perfect for our manufacturing semester!

embroidme-wyandotte.com

Thanks to our new sponsor Dura-Bar for providing us with some cast iron stock. This material will be used to fabricate our brake rotors for RW9!

www.dura-bar.com

Thanks to our new sponsor Aircraft Tool Supply for donating a tube beading kit. Our Powertrain members are excited to put it to use!

www.aircraft-tool.com
Our team’s success is made possible through the generous donations and support from the following companies. Without them our team would not have the resources needed to provide invaluable hands on experience and to manufacture our formula cars. From all members of our team, thank you Warrior Racing sponsors!