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TTU Motorsports sets new world record at Formula SAE competition

COOKEVILLE, Tennessee. (June 7, 2016) - Each May, more than 100 international student teams travel to the Michigan International Speedway to compete in the largest annual Formula SAE competition in the U.S. This year, the Tennessee Tech cost report team placed first of 115 schools and set a new world record, improving their 2015 world record, for the most cost effective car by several thousand dollars. The business team placed fourth, barely missing a spot in the top three and the design team improved their ranking, moving up thirty slots from last year.

"For the past three years, TTU Motorsports has turned heads at their arrival and continues to improve their performance," said Miranda McConnell, business team director.

The competition began with the static events on Thursday. Each team's results from the static and dynamic events make up an overall score for each team. Static events include cost report, design report and business logic presentation; and the dynamic events include acceleration, skid pad, autocross and endurance.

While the performance of the car itself is important, the scoring of the static events is equally important. The TTU Motorsports team builds and designs its car based on the car's ability to meet the standards set forth in the business logic plan and cost report.

"We improved our dynamic event results dramatically and continued to impress other students and judges with our unique style and design," said Sam Cafferty, lead mechanist and member of the design and business teams. "I'm proud of this team and our car, and I'm excited to see how we do next year!"

The cost team studied the rules to find innovative ways to save money on manufacturing costs. The business team held weekly meetings with local experts to improve their presentation. During the 2015-2016 season the team worked for 50 weeks, on 10 Saturdays with around 20 members working an average of 10 hours each per week to build two complete cars: "Carl" and "Zeus."

The team ran more than 100 aerodynamic simulations throughout the year and conducted multiple engine tests to ensure the car's best performance. Because "Carl" was completed early, the drivers were able to train and find necessary improvements for final fabrication. Only minor corrections had to be made to "Zeus."

"The final product taken to FSAE Michigan this May was much more than just a performance vehicle parading around a track, it was a result of the highlighted diligence and diversity of TTU Motorsports, the incredible support from our sponsors and our vision for high school STEM education," said Eric James, executive director and business team member. "Because of the help we received from our sponsors, our car was a crowd favorite and we had students and industry leaders constantly gathered around the paddock."

After this year's competition, TTU Motorsports moved up 59 places in the world standings and still holds the world record for the most cost efficient car. Updates to business plans and collaborations of lessons learned began immediately when the team returned home May 16.

"Our drivers put down some of their best lap times in each event and did all they could to drive the car to its true potential," said McConnell, one of eight drivers. "Although we did not place as highly as we would have liked overall, each team member said they learned something valuable to help them improve for next year's competition."

TTU Motorsports is a professional student organization of the Tennessee Tech College of Engineering. Tennessee Tech College of Engineering offers ABET-accredited undergraduate programs in chemical engineering, civil engineering, electrical engineering, computer engineering, mechanical engineering, and computer science. At the graduate level, the college offers both master's degrees and a doctorate in engineering. Founded in 1915, Tech offers more than 40 bachelor and 20 graduate programs to nearly 11,000 students on its 252-acre central campus in Cookeville, Tennessee.

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