

Edwardsville's Lewis, Hentz place fourth with Missouri S&T's Formula SAE Electric team

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ROLLA, MO - Missouri University of Science and Technology's Formula SAE Electric Team placed fourth overall in a race of Formula One-style cars that are powered by electricity. Missouri S&T placed first in efficiency and second in cost. Missouri S&T placed fifth overall in 2016.

The competition, held during Formula SAE-Lincoln June 21-24 at Lincoln Airpark in Lincoln, Nebraska, is an international student design competition that demonstrates the viability of electric power by challenging students to design, build and race electric-

powered Formula One-style cars. Edwardsville natives Drew Lewis, a senior in mechanical engineering, and Brendan Hentz, a sophomore in aerospace engineering, were among the students competing.

As part of the competition, students present a budget report and detail the engineering principles behind each car's design to a panel of industry experts. Each team's car must pass a rigorous electronics inspection to ensure the car's safety before competing in four dynamic events.

A skid-pad event tested the car's cornering on a figure-8 course. An acceleration test measured the car's straight-line speed over a short distance. A one-lap autocross event tested the car's performance on a tight course. Each team's fastest lap of four attempts determined the winner, as well as the starting order for the final event - an endurance race to prove durability. In the endurance race, the car must withstand the stress of long-term driving at elevated speeds over a long course. Each race is timed to rank the teams; none of the events are head-to-head races.

The Missouri S&T Formula SAE Electric Team's car has a student-designed and -manufactured chassis, an aerodynamic fiberglass shell and a custom suspension system. The car's battery pack, which consists of approximately 50 lithium battery cells, can produce a maximum voltage of nearly 300 volts and a current of roughly 200 amps.

The Formula SAE Electric Team is one of 18 student-run teams in Missouri S&T's Student Design and Experiential Learning Center (SDELC). The SDELC, housed in the Kummer Student Design Center, provides real-world team-based operations, including computer design laboratories, a manufacturing shop, office space and logistical support. Design teams mirror small start-up companies that plan large-scale projects, organize into departments, raise funds, communicate their ideas and solve open-ended design challenges. Most teams compete annually against other collegiate teams from around the country and the world. For more information about the teams, visit design.mst.edu.

Dr. Ryan Hutcheson, assistant teaching professor of mechanical and aerospace engineering at Missouri S&T, is the Formula SAE Electric Team's faculty advisor. For more information about the events, visit students.sae.org.