

What Is SAE?

SAE stands for the Society of Automotive Engineers. We are an organization dedicated to the sharing of information and exchange of ideas for advancing the engineering of mobility systems. SAE is your one-stop resource for standards development, events, technical information and expertise used in designing, building, maintaining, and operating self-propelled vehicles for use on land or sea, in air or space.*

What do we do?

The WMU Society of Automotive Engineers' primary focus in the recent past has been the engineering and construction of a Formula SAE racecar. However, interest has also been expressed in starting Formula Hybrid and Mini-Baja programs.*

For the construction of our Formula SAE racecar, we have divided our team into five different subteams. These subteams include Driver Ergonomics, Drivetrain, Engine, Frame, and Suspension. The Driver Ergonomics team takes care of the general cockpit area, including the seat, dashboard, and pedals.

The Drivetrain team is in charge of transferring the power of the engine to the wheels through the differential and axles.

The Engine team fine tunes the engine to achieve maximum performance and creates the gas tank and intake and exhaust manifolds. The Frame team is responsible for the construction of the car's frame and bodywork. The Suspension team determines how the wheels attach to the body and react to the road. This includes the A-arms, brakes, springs, dampers, and steering.

We also have a President, Vice President/FSAE Project Manager, Secretary, Treasurer, and Webmaster/Multimedia Chairman.

What can we offer you?

By becoming an active member in the WMU Society of Automotive Engineers, you will be able to build your resume with real-world experience and create industry contacts through our sponsors, faculty advisors, and events in which we participate. Through our FSAE program, members have been able to move on to such prestigious companies as Beechcraft, Bio-Met, Flowserve, Roush, Rolls-Royce, and NASA. Skills acquired through the WMU Society of Automotive Engineers have assisted in making our members highly sought after by employers and in easing the transition from the academic lifestyle to the professional lifestyle.

Do I have to be an engineer?

We are not only an organization for engineers and grease monkeys; there is also a business side to our organization. We are particularly looking to recruit students interested in finance, marketing, web design, and photography. We are also more than happy to have anyone who has an interest in cars and wants to help build one from the ground up. We need people to help acquire and retain sponsors, maintain financial records, maintain our website, present a marketing presentation at competition, and create a report detailing the cost of our vehicles based on SAE guidelines for competition.

*retrieved from www.sae.org/about

*for more information on these programs please visit www.sae.org

What Is Formula SAE?

The Formula SAE® competition is for SAE student members to conceive, design, fabricate, and compete with formula-style racing cars. Restrictions are placed on the car frame and engine so that the knowledge, creativity, and imagination of the students are challenged. The cars are built through a team effort over a period of about one year and are taken to the annual competition for judging and comparison with 120 other vehicles from colleges and universities throughout the world. The result is a great experience for young engineers on a meaningful engineering project as well as the opportunity to work as a dedicated team.

Western Michigan University's Formula SAE Racing team is currently comprised of approximately 30 students from several majors, including:

- Mechanical Engineering
- Aeronautical Engineering
- Civil Engineering
- Industrial Design
- Engineering Graphics

The Formula SAE program allows students to extract the knowledge learned from their textbook courses and apply them in a real-world application. Students are responsible for all aspects of the vehicle design and are in control of all manufacturing and testing techniques.

FSAE Competition

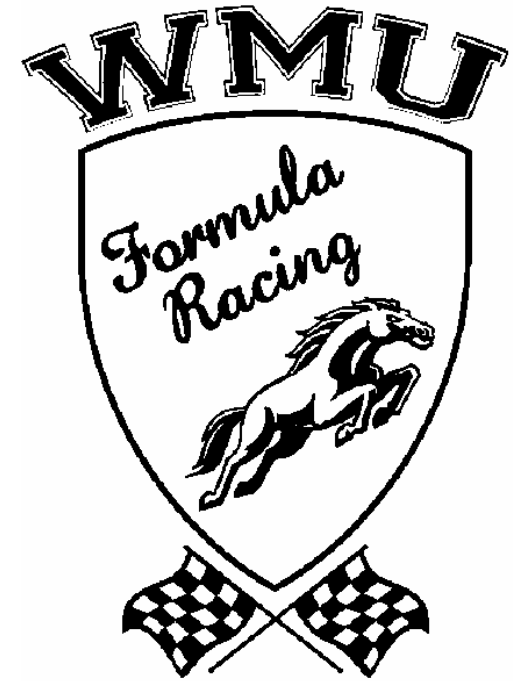
The annual FSAE East competition, sponsored by the national Society of Automotive Engineers, is held annually in Michigan during the month of May. The 2006 competition in North America was the first to be divided into East and West segments due to the growing popularity and attendance. FSAE East, however, is still the most prestigious of all the Formula events throughout the world because of its heritage. Other FSAE competitions include Formula Virginia (just added this past year), Formula SAE Italy, Formula SAE Australasia, and Formula SAE Brazil. Teams at the FSAE East competition compete in the following static and dynamic events:

Static Events

- Engineering Design- Judged on design of vehicle and engineering principles used to validate design decisions
- Cost Analysis- Judged on how each team constructed their vehicle within reasonable cost limitations
- Sales Presentation- Judged on marketability of vehicle

Dynamic Events

- Skid Pad- Ability to handle cornering accelerations (Best posted time)
- Acceleration – Ability to accelerate over 1/8 mile (Best posted time)
- Autocross- Formula SAE designed road course (Best posted time)
- Endurance – Ability to complete 14 miles (20 laps) of Autocross course (Best posted time/Ability to complete)



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