

this issue

- FSG Competition Registration **P.1**
- Resource Management **P.2**
- Chassis Team **P.2**

IMPORTANT DATES

April 19th
Unveiling

June 20th
Formula SAE Lincoln Competition

August 1st
Formula Student Germany (FSG) Competition

FINANCE SUMMARY

Amount raised
\$27,000 + composite materials

Amount needed
\$14,000

Total cost projection
\$41,000 + composite materials



FSG Competition Registration

This year marks an important milestone for the UW Formula SAE team as its first year participating in a competition outside the United States. Early on in the planning process this summer, we decided to pursue the Formula Student Germany (FSG) competition.

Over the past few years, the competition, held in Hockenheim, Germany, has emerged as the premier competition where many of the best teams from around the world come to prove their cars. Furthermore, as it is held in the beginning of August, it not only gives us the opportunity to take the entire school year to perfect our car, but also allows us to run Formula SAE Lincoln in preparation for our international debut.



Front page photos: Snapshots from the team at the FSAE West 2011 competition



While we are now registered for the FSG event, our participation in the event was never guaranteed. Unlike its counterparts in the United States, registration for FSG is limited by a quiz on the rules governing the competition. This quiz is released promptly at 12:00 pm in Germany and the order in which teams

finish the quiz determines the order in which they register for the competition.

With only space for 78 teams, the slots for the competition fill up in minutes. At 2:00 am in a recently snow-struck Seattle, the leads assembled and prepared for the race to register. At 3:00 am, the quiz went live and by 3:04, we were registered. In the moments that followed, the 78 slots filled and as we watched the waitlist climbed to 46 teams.

As one of only six US teams competing at FSG, we are honored to be attending the event, and come August 1st, we'll be at the Hockenheimring ready to prove ourselves.



Resource Management

The resource management (RM) team, led by Brian Walter, is responsible for the management and upkeep of all of the team's equipment, materials, and facilities. In short, the hardworking RM team keeps us running.

One of the largest functions they have is maintenance of the teams computing resources including our CAD lab, FTP server, internal wiki, and thousands of dollars in donated software. These design tools give us the

capability to both visualize and simulate our cars before they are built, while the collaboration tools allow the roughly fifty student engineers on the UW FSAE team work together to develop a cohesive and effective product.

Another important function of the RM team is the tracking and allocation of materials. In order to build a car each year, we need a large amount of numerous materials ranging from carbon fiber to

aluminum, steel, and high-density foam. The RM team catalogues and accounts for all materials we bring in and all materials we consume to determine what materials we have and what we need to acquire through donations or purchases in order to complete the car.

The Resource Management team makes us more efficient and more capable with each passing year and plays a vital role in the continued success of the UW FSAE team.



Above: Team 18 chassis sold by the RM team in 2011



Below: Team 20 chassis sold by the RM team



Above: Team 22 half monocoque, half spaceframe chassis during assembly

Chassis Team

According to Pat Clarke, a “chassis is truly just a torsional tube and a bracket.” This year, chassis lead Ian Dahl has taken that message to heart and worked to simplify the design and construction of our chassis while improving stiffness and weight. In order to accomplish these goals, the decision was made early on to go to a full composite monocoque chassis.

Last year, we used a chassis that was half monocoque and half spaceframe in order to gain knowledge on building a large composite chassis. Throughout the construction of last year's chassis, the chassis team learned many,

sometimes hard, lessons and this year the team is taking those lessons and applying them to a full composite monocoque.

This approach allows us to lower the weight and improve stiffness by unifying the entire chassis into a single piece. Furthermore, the chassis team has been able to decrease the manufacturing time for the chassis because we are able to reduce two structures manufactured through vastly different processes to a single structure with a single process flow.

In addition to taking lessons from last year, the chassis team is working hard to improve our knowledge of

composites through testing and the implementation of new tools. The team has spent a great deal of time investigating hard points and composite design through testing, experimentation, and research. Additionally, with the Mechanical Engineering Department's new CNC router and ANSYS Composite PrepPost, the team is working to automate the process of cutting carbon fiber while improving accuracy.

While the chassis can be simplified as just a “torsional tube and a bracket,” it is the base on which the rest of the car comes together and the chassis team works hard to make it a reality.

THANK YOU To our generous sponsors

We design build and test our own small Formula-style race car. We do our own engineering, our own machining and make our own carbon fiber parts. Our drivers are all students and we maintain our own cars. We design. We build. We compete.

None of this would be possible without our generous sponsors. Thousands of dollars and man-hours go into this project. Together we've made it happen for the past 22 years. We look forward to our 23rd year of competitive engineering and building corporate relationships.

CONTACT US Or learn more about the team

Visit our website at:

www.uwashingtonfsae.com

And check us out on Facebook and Twitter

**Teaching Assistant
and Team Directors**

Email: uwfsae@uw.edu

Dr. Emery, Faculty Advisor

Email: emery@uw.edu

Office phone: (206) 543-5338

Fax: (206) 685-8047