Umaine's Formula SAE car team is off to a good start this year. We are now officially recognized by Student Government as an active group. The team is registered for competition in Michigan from May 11th to May 14th. Our arrangement of officer positions has been changed in order to divide up the work in a more efficient manner. Elections have been held, and officers have been chosen as follows:

- Captain: Heman Norris
- Lead Engineer: Luke Saindon
- Administrative Assistant: Gerard Desjardins
- PR Head: Nick Quatrano
- Business Manager: Ryan Merchant
- Chassis Lead: Luke Saindon
- Suspension Lead: Ryan Means
- Aerodynamics Lead: Nick Quatrano and Lucas Mascia

Chassis and Suspension groups have been working hard to finalize their component designs in Solid Works. It is necessary to have a complete model of the car before continuing fabrication. The semester is quickly coming to a close, and we must be prepared to meet the deadlines for our structural equivalency and requirement compliance forms, which will be due shortly after winter break. We intend on having a rolling chassis by the middle of February.
**Chassis**

The chassis team has been hard at work this fall. Since the only parts of the frame design that are still in question are mounting tabs, it has been possible for us to push ahead with the fabrication of the tubular structure while other portions of the car are still being designed (although we are extremely close to a complete design at this point).

Nearly all of the tube structure has been completed at this time, except for some critical pieces such as the harness bar. Big thanks to Jason Scharold, our in house welder, for putting in long hours to get the chassis done. It just came off the jig November 2nd. We have not gotten an accurate weight yet, but it feels like it’s in the 50-60lb range. Once panels and tabs are finished our end goal is 85lbs.

Concerning fabrication our next big step is cutting and fitting the internal stressed aluminum panels. These panels not only make the frame more rigid but also protect the driver’s legs from moving suspension components and the road surface. Other future plans would involve a frame heat treatment and powder coating.
Suspension

The suspension team is very close to finalizing all designs and beginning the manufacturing process. This is exciting as purchase orders will be going out soon and important parts and raw materials will be coming in ready for assembly.

Power delivery is a concern that has fallen into the suspension team's responsibility. This caused some delay in our schedule, however, everything has been sorted out and we're decided on two drive train options that will be easily interchangeable. The first option is a solid slug that mounts both the sprocket and the inboard brake rotor, providing a solidly driven axle, the slip angles or the rear axle will be adjusted with an anti-roll bar. This solid drive slug system will be lighter weight and cheaper than the second option, an OBX brand torque-biasing differential. The torque-biasing differential will provide less interference for the chassis while cornering. Both drive train options have been designed to ride in the same uprights and bearing so that swapping them out for testing will be a breeze.

Aerodynamics

Luckily for the aero team, the rule changes for the 2010-2011 season did not have any effect on the design of our components. Because of this the team did not have to modify the models and has been able to begin working. At the end of semester, foam models of the nosecone and side pods had been completed. Bondo has been applied to the side pods and sanded down in order to remove any surface imperfections. Duratec surface primer will then be applied, and the models will be used as plugs to create molds from.

The aero team has been given the responsibility of designing and testing an impact attenuator, which will be led by Nik Bennett. Research has begun on different materials and methods of construction.

We hope to have our plugs ready to go by the end of this semester so that we may begin making our molds and final parts early next semester. The team will be working with the AEWC on the vacuum infusion part of our process.
Contact Information

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For more information about our team, visit:
http://www.umaine.edu/mecheng/Website-FSAE/site/Home.html

For more information on Formula SAE, visit:
http://students.sae.org/cometitions/formulaseries/about.htm