Abstract:
The Formula SAE® competition challenges engineering students to design and build a open wheel style race vehicle that will be entered into competition against 80 universities from around the globe. The competition tests the students’ abilities to conceive, fabricate, develop, and test their vehicle while providing a real world, hands on project. The competition evaluates the vehicle’s physical abilities through skid-pad testing, autocross and an endurance race. Students must also be able to market their vehicle, and defend decisions made during design and construction with a complete cost analysis.

Objectives:
- Design and Fabricate a competitive Formula car for the 2012 FSAE competition in Lincoln Nebraska.
- Construct a more ergonomic frame with improved torsional stiffness of 1780 ft-lbs/degree.
- Design a frame to accommodate a KTM 525 engine while keeping the weight under 66 lbs.
- Lower the center of gravity and increase rear weight bias to create a better handling car.
- Use adjustable pedals to accommodate a wider range of driver sizes.
- Use thermoformed plastic to create a lighter and more aerodynamic body.

2012 Formula Chassis Team
Pictured from left to right: First row: Jeff Rogers, Nate Neudecker, Jake Braulick, Ben Scanlon. Second row: Barry Johnson, Matt Hansen, Matt Hachey, Paul Kirchner, Chris Harkins, Jake Varnum.
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