**Development of a Formula SAE Body**

**MOTIVATION**
- Based on the results of last year’s competition, one of the major proposed improvements for the upcoming prototype is body design.
- By approaching this task as a Senior Design Project, it would allow for better and more in-depth analysis that would yield an optimal design.
- Advanced concepts from different fields of engineering are applied, such as: Fluid Dynamics, Structural Analysis, Mechanics of Materials and Computer Aided Design.

**OBJECTIVES**
- To develop a body for the new FIU-SAE prototype racecar with the proper studies and analysis.
- To be able to accommodate our limited budget while maintaining a highly competitive vehicle.
- Optimize previous racecar prototype design.
- To be able to participate in the 2013 Formula SAE Competition held in Brooklyn, Michigan.

**PROCESS**
- Design Phase
  - Rough Sketch Rendering
  - Modeling of Vehicle Body
  - Several Iterations of Shapes and Sizes
  - Final Design Rendering and Optimization
- Testing Phase
  - CFD and Structural Analysis
  - Result-based Iterations
  - Physical Body in Wind Tunnel
- Manufacturing Phase
  - Mold Assembly
  - Layering of Carbon Fiber Fabric
  - Resin Saturation
  - Vacuum Seal
  - Mold Removal for Final Product Reveal

**TIMELINE**

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**TEAM**
[Images of team members]