

# Shell ECO-MARATHON<sup>®</sup> AMERICAS

## TEAM FACT SHEET



### **Penn State**

Country: United States

Design Class: Prototype

Fuel Type: Hydrogen

Team Name: Blood, Sweat & Gears

Vehicle Name: HFV

### **Team Members:**

Leland Engel - faculty advisor

Jared Kloda - member

Matt Shiskowski - member

Toby Snider - Team manager

Peter Sullivan - member

Laura Slingerland - Primary Driver

Nicole Peterson - Secondary Driver

Nate Troupe - member



## **Award Submission(s):**

### **Safety**

We have the absolute best functional and aesthetically appealing rollbar and driver's cage.

The braking has been improved this year by improving the front rotor brake surfaces. The vehicle stops at 2/3rds the distance as last year's vehicle at max speed.

### **Technical Innovation**

Our main goals this year were to reduce weight and reduce drag.

The steering system has been switched to carbon fiber in part of an all out effort to reduce weight and drag. The carbon fiber body aerodynamic analysis shows an improvement in drag over last year's body. Additionally the body is lighter by almost a factor of two over last year's body.

### **Design**

The objective this year was to reduce weight and to improve the aerodynamics of the vehicle.

The body has been completely redesigned this year with documented analysis for increased aerodynamic performance. The body and underbody are composite fiber and the other parts have been weight relieved to reduce weight. Additionally, aesthetic appeal was also part of the needs of the design team.

### **Communication and Marketing**

Our team has been published in the ASME Central Pennsylvania Section Newsletter as well as a weekly blog on [psueco.blogspot.com](http://psueco.blogspot.com). Anyone can come by and find out our weekly schedule on the blog and see what is happening that week with the car.

