



SENIOR DESIGN PROJECT SYNOPSIS – SPRING 2013

SHELL ECO-MARATHON

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The Florida International University design team for the Shell Eco-marathon will design and produce a vehicle to compete in the 2014 competition. The Shell Eco-marathon competition first takes place in Houston, Texas on a national level, and then moves to an international level competing against high school and college student teams from Europe and Asia as well.

The project objectives for the Shell Eco-marathon vehicle for the FIU team include the following:

- Ensure all engineering ethics are followed during project planning, construction, assembly, and documentation.
- Complete the project with life-long learning and global learning impacts in mind.
- Focus not just on engine power and weight, but also on overall weight distribution.
- Build an optimized vehicle that will produce the desired results.

The participating FIU Shell Eco-marathon team from 2012 designed and produced a vehicle for the 2013 competition. The team did not place in rankings after the vehicle was involved in an accident where it was heavily damaged.

The design team from this year has taken in the previous team's vehicle and initially corrected and repaired all vehicle damage. Following the repair process, the team then focused on improving elements such as the chassis, steering, and remanufacturing the proposed open monocoque body.

The vehicle will still rely on gasoline power using the original engine that the previous team removed from a scooter.

The 2013 vehicle as manufactured by this team has received a big overhaul in design and mechanical systems to ensure that this vehicle will complete the competition in 2014.