

Electrathon Racing

Introduction:

I know that some of you have heard about Electrathon Racing and I would like to share with you what Electrathon Racing offers students from an Engineering and Business Management standpoint. I am writing you on behalf of ElectrathonofTampabay.Org a nonprofit umbrella corporation chartered in the State of Florida to promote Electrathon Racing in the Tampa Bay region. It is our hope to we can solicit your participation and/or support.

What exactly is an Electrathon?

An **Electrathon** is a custom built three or four wheeled electric vehicle, somewhat similar in overall appearance to a Go-Kart but is powered by an electric motor and batteries.



To compete as a sanctioned Electrathon, the vehicle must meet some design requirements which include but are not limited to:

- max 12 feet long and max 4 feet wide.
- battery weight limited 67 pounds max using a battery chemistry of sealed lead acid.
- Driver's weight is ballasted to 180 lbs for fairness.
- Safety regulations require features such as braking systems, 5 point restraint, roll bars, and electrical disconnects.

In Electrathoning, the students immediately see the need to work as a Technological Team in a competitive environment. They quickly see the need to develop their Entrepreneurial Skills to manage a Technological Business Endeavor. From an Engineering Knowledge point of view, Students are actively exposed to a wide variety subjects from Aerodynamics, AutoCad, Power Electronics, AC/DC Circuit Theory, Electric Motors, Machine Design, Computer Control of Electric Vehicle Propulsions Systems, Electronic Instrumentation, Fabrication and Assembly, Structural Analysis, Performance Testing and Data Analysis.

How are Electrathon Raced?

The basic racing format is to determine which car can travel the furthest distance in one hour's time within the limitations of battery weight and other factors mentioned above.

The main design problem is posed by the fact that fast speeds drain the batteries rapidly resulting in the car not being able to continue in motion for the entire hour, so design teams must compromise speed in order to gain distance.

The relatively low cost of the Electrathon Racing has made the sport a popular activity for many colleges and technical schools although it has achieved largest participation among high school age students world-wide. In the USA it is strongest in the North East and Pacific Northwest States as well as Canada and Mexico.

We currently have (3) HCPS High School Clubs building cars: the Brandon Eagles, the King Lions and the Tampa Bay Tech Titans. There are (3) other schools in the state already racing and 3 to 4 open class participants. We are working with the state coordinator of the national sanctioning body ElectrathonAmerica.org whose goal is to put on at least 5 races year across the state. ElectrathonofTampabay.org will be sponsoring its own race in February of 2009.

Come join the fun! Visit us at [Http://ElectrathonofTampabay.org](http://ElectrathonofTampabay.org) (under construction)