**Robotics**

**Lessons Learned**

Gator Gears thoughts on what they learned while participating in a FIRST Robotics Competition.

FIRST Robotics has encouraged us to post lessons that we learned during our initial attempt to build a robot and compete. It is our hope that these lessons will encourage and be helpful to other teams.

Teams have to understand it is not all about wiring up pieces of metal to do your bidding or toss a frisbee across a hall.

Teams have to focus on dividing and conquering all the different jobs that will add up to success.

GATHER INTEL

* As a new team we spent a lot of our time collecting information from friendly other teams. {Our friend at Lowell, Ofri Harlev, Team 4159, CardinalBotics, was a Dean's List winner in 2012}
* You want to work with as many other knowledgeable teams and people as possible, because it is more fun that way and there will be more information accessible.
* Next time we will recruit more mentors who can be on campus with us. We had a great Team advisor who was very generous with us but it would have been great to have had another engineer steer us in a smarter direction.
* Even without advisors at elbows length you can find almost anything you need on YouTube or the web.

TEAM ORGANIZATION

* It worked best if people could take over areas that they enjoyed working in. Take time to make sure that students like the area they are assigned to.
* We had a team member who was great at media. Having an early presence on the web and Facebook meant we could all communicate easily.
* Find kids who know programming: JAVA, C+ and CAD.
* We had to be flexible and move away from original rigid ideas of how we would divide work.
* We should have spent more time in the design stage instead of jumping in to work with materials.

MONEY

* You can’t do much without this stuff and we did not have enough.
* Fundraisers are actually really fun. They are a great way for people to hang out with each other. People seemed to get excited at the prospect of cash coming in and became very innovative on how to make more!
* Building a robot takes lots of money, every dollar helps. A robot team is limited without funds.
* For next year we will start earlier to get more funding, sponsors and mentors.

We should focus on issues like team organization, robot construction, lessons you have learned, obstacles you faced, your sponsors, and the importance of robotics. See the "Evaluation Criteria" below for more details.

You have to learn how to work well with other people. Not only does this help you, but it helps your team as a whole when multiple people work together towards a single goal.