

Dulaney Robotics

Team 1727

Team 1727 was established in September of 2005. The team immediately created a strong infrastructure and voted to hold elections for the following positions: president, vice-president, secretary, treasurer, and web site manager. We took several meetings to clearly define the roles and responsibilities of the positions and the hierarchy of the club. We further established general club rules as well as team goals. After this was instituted, we held elections for the positions. The leadership then decided to hold leadership meetings every Wednesday morning to keep the club organized and on the same page.

We then made several key changes to our structure to deal with unexpected changes. During the build season, we found the original infrastructure breaking down as many of the different build teams were becoming mixed together. Further confusion was caused by unsteady attendance. The leadership team met, deciding that the team had to create sub teams or committees. We established a shooting device team, a team for the sweeper device and hopper system, a drive train team, programming team, an integration team, an electronics team, and a web site team. We defined the responsibilities of the team and assigned deadlines that each team must meet. We also gave out more leadership roles and assigned a team leader to one person in each of the teams. This person was responsible to reporting to the vice-president as well as informing the leadership team of their current state during the leadership meetings on Wednesday mornings.

Throughout the preseason, our team focused on building trust and cooperation between members through several team building events. Our team has found a particular enjoyment of sports such as Frisbee and dodge ball. Having these times to relax and build friendships allowed our team to grow closer and these friendly relationships proved valuable during the high stress build season.

In early November, we attended a workshop held at Capitol College to familiarize ourselves with local FIRST teams and to introduce our members to the many different parts of building our robot. This proved to be crucial because we had virtually no prior experience with pneumatics, FIRST electric components, drive train design and countless other concepts. From this experience we gained a holistic view of the upcoming build season and our first goodie -a Dremel rotary tool which we had won.

During the preseason, we practiced building many small robots from manufactured kits including two custom designed Vex Kit Robots. This allowed the club as a whole to gain experience of what it was like to build robots and deal with the frustration that would occur. We held a Carrabba's dinner in early December to inform the community as well as the school of the enormous challenge that the club has taken on. The dinner was a huge success and raised well over three thousand dollars with an attendance of over four hundred people. At the dinner, we held demonstrations of the robots we had built and allowed the community members that attended to build their own robots in the limited time we had. During the last few weeks of December, we reviewed footage from previous FIRST events to prepare for this season's challenge. The movies allowed us to discover what a regional and national competition was like, as well as the planning and development that goes into building a robot.

We discovered quite quickly that countless things were required during robot build. Communication was a key factor. Luckily, our team established communication as a priority early on in the preseason. To obtain this difficult goal, we set up a web site, which was frequently updated and was a way to keep the entire team and community informed of our progress. We also established an

email system where we sent updates about club meetings and current events as well as updates of the development of our robot. In the school, we took the initiative to build and put up a bulletin board, which then painted in the school colors. On this bulletin board, we included pictures, a schedule, and other information important to the club and the student body of our school. We developed several newsletters covering span of the build season, which then had published. These newsletters were then sent to all of our sponsors and local businesses to keep them updated. Additionally, we made several presentations to members of our school and community including those to a gathering of our county's physics teachers and Olympiad administrators, to the AAI Corporation, and to the attendees of our fundraising dinner.

On January 7, we attended the regional kickoff, also held at Capitol College, to collect our kit of parts. This reunion with the teams we had already met earlier at the Capitol College workshops allowed us to reinforce our relationships. The kickoff event also made our team incredibly excited about the upcoming build season and we did not hesitate to begin work on the task before us.