



Granada Hills Charter High School Robotics Team



FRC Chairman's Long Essay Submission

Team 599 was founded in 2001. Since that day, the Robodox have been going full speed at everything FRC has to offer. From being a 2003 regional finalist in San Francisco to our latest win at the off season competition Tidal Tumble, we've continuously grown into a supportive team and community. With our outreach at middle schools for years and our winter coding camp, we have remained committed to passing on our passion for STEM to the community. With a dedicated team of 33 members and a reliable group of mentors and coaches from varying backgrounds, our team has come into 2022 with an optimistic mindset and a determination to embody the gracious professionalism that FIRST stands for.

After Covid shut us down, our team was faced with a major learning gap with only 5 team members having gone through a build season. We have encouraged our leads and past alumni to pass down their knowledge to younger team members by putting in extra hours and implementing new activities. Last semester, we had 6 weeks dedicated to rookie integration, where we immersed our 14 rookies into the various technical and executive divisions of the team. When it wasn't a division's turn to do rookie integration, the division lead would guide their members in offseason projects such as preparing for build season, brushing up on past concepts such as robot design and strategy, recruiting mentors, and practicing technical skills. By carefully planning out and sticking with our offseason projects, we were able to begin the build season with 2 new mentors, 4 affiliates, and an eager group of team members!

Once rookies were situated within their new divisions, they helped out with offseason projects and got comfortable in the team environment. We've also had team leadership implement productivity solutions such as Trello, which has helped our team better manage and complete our tasks. Through offseason competitions such as Tidal Tumble and Beach Blitz, our team has grown far closer and have made significant improvements in certain systems. We've taken these competitions as an opportunity to do mock build seasons, where we enacted the urgency and efficiency we envisioned for our 2022 season. As strong believers in impact, we've assisted several teams through extensive services such as Dox Spot and the Robot First-Aid Station. In RFA, we are able to pair teams with necessary parts at competitions and the Dox Spot station is a programming assistance and debugging service. Through these two services, we've been able to help out and connect with countless FRC teams. In the past, we assisted with 8778's robot repair at a regional, which enabled them to move onto worlds. At the recent Beach Blitz competition, we assisted teams 2659, 1836, 4079, and 1160 through Robot First Aid and DoxSpot.



Granada Hills Charter High School Robotics Team



We also hosted several team socials to build up a greater sense of comradery with events at laser tag, ice skating rinks, among others with high attendance at all of them! We even participated in a joint team social with team 7157, Mubotics, to connect with other members of the FIRST community. Our team has even continued talking with them throughout the build season and exchanging advice.

In an effort to make the STEM field more inclusive, we've put together several outreach events. We had 2 members dedicated to mentoring VEX IQ teams and 4 members volunteering at VEX IQ competitions across the semester. This past winter, we hosted a 3-day virtual VEX VR workshop for students on our TK-8 campus. There, we used VEX VR to illustrate basic programming concepts to students and show them the benefits of a career in robotics. As a Title I school, many of Granada's students come from low-income backgrounds, which is why we encourage GHC students to join outreach activities. However, we also plan to offer our classes to other interested local middle schools.

Additionally, we implemented novice pairing, where we've put first-year and second-year rookies together during the prototyping phase to address the issue of veterans potentially overpowering in group discussions. We have also established a detailed build season schedule of each week, with important dates being tracked and reminded of by our Master Scheduler. This year, E&P is creating a practice robot for programming to test out their code earlier in build season, to prevent any last-minute cramming. To maintain the flow of knowledge across the team, we've started focusing more heavily on documentation, where each technical and executive division writes down all their knowledge and any new resources or ideas they discover. This enables our current knowledge to be more easily passed down for future members and for everyone on the team to be aware of what others are working on.

We've also been able to successfully adapt to new Covid protocols. We have a running Zoom call for mentors to hop into and talk with our team. In addition, team members have volunteered their places to work at after our team was prevented from accessing our shop for the first week of build season. To encourage more active participation, we're having team members log the hours they spend at robotics to ensure more equal contributions are being made by everyone. Our team's strong values of inclusivity and collaboration have motivated us to try out new systems that promote more representation and teamwork within our team.

This past year, we've served our community in and out of FIRST. Encouraged by the values they've learned in FRC, our students have started initiatives within their communities and on campus such as Code4Students, a club that teaches programming to TK-8 students every Friday.



Granada Hills Charter High School Robotics Team



We also have RoboGirls, a club aimed towards girls interested in robotics and engineering, which introduces girls to engineering concepts through tinkerCAD and hands-on building activities. Lastly, our team members are also responsible for Girls Who Code, which provides a supportive community for girls and nonbinary individuals interested in computer science and has introduced them to languages such as Python, HTML, CSS, and JS.

With a diverse team of members from all backgrounds, we've been able to make significant improvements to our team's systems and foster a welcoming team environment for everyone. Our team is looking forward to making further progress in 2022 as we build up technical experience, use creative problem solving, positively impact our communities, have fun, and work together as a team! Dox rox!