FRC Team 7042: Long Beach Poly Rabbotics

Student Team Handbook

2020-2021

TABLE OF CONTENTS:

1 About FIRST

FIRST, For Inspiration and Recognition of Science and Technology, is a non-profit organization dedicated to inspiring young people. Through programs such as the FIRST Robotics Competition and FIRST Lego League, students are emboldened to excel in the areas of science, technology, engineering, and mathematics. FIRST was founded in 1989 by Dean Kamen (inventor of the Segway and the insulin pump) and has since become a large international organization reaching thousands of students from elementary school through high school. For more information, visit https://www.firstinspires.org/.

1.1 About FRC

FRC, short for FIRST Robotics Competition, is FIRST's oldest robotics program. It is designed to provide a rigorous engineering challenge to high school students as well as teach leadership, collaboration, and project management. Over three thousand teams contain anywhere from fewer than ten to over one hundred students with guidance and support from adult mentors. Each year, every FRC team builds a robot in the six-week "build season" to compete in a game released in early January.

1.2 Coopertition®

FIRST extends their philosophy through their value of Coopertition®, which “produces innovation. At FIRST, Coopertition is displaying unqualified kindness and respect in the face of fierce competition. Coopertition is founded on the concept and a philosophy that teams can and should help and cooperate with each other even as they compete. Coopertition involves learning from teammates. It is teaching teammates. It is learning from Mentors. And it is managing and being managed. Coopertition means competing always, but assisting and enabling others when you can.” (FIRST Website, https://www.firstinspires.org/about/vision-and-mission).

2 About the Team

2.1 Mission & Vision

2.1.1 Mission Statement

To build a sustainable, well-functioning team whose members enthusiastically explore the fields of engineering, science, technology, and mathematics, while inspiring others to follow suit through profound, committed outreach/community service connections.

2.1.2 Vision Statement

To prepare the next generation of STEM leaders and innovators by building a coalition of students, mentors, and community partners working together to further STEM education and initiatives in the local Long Beach and FRC communities. This is fulfilled through successful team operations; a student-led and vision-oriented culture; and a variety of workshops, demonstrations, and competitions.

2.2 Team History

Poly Rabbotics was founded in 2017 by Thena Gutierri, a Senior at the time, and Dr. Aberle at Long Beach Polytechnic High School. We started off with 20 students, and have grown up to 30+ students.

2.3 What We Do

2.3.1 Educate

One of our primary goals is to provide a unique educational platform for our students. FRC allows us to provide a unique learning environment where students work alongside professionals and experienced peers to gain industry standard skills in both technical and non-technical fields.

The offseason consists of the time between our last competition and the beginning of build season - usually early May until the beginning of January. During the late spring and summer we debrief the past year and prepare for the upcoming year, gearing up to train our new members and hone our technical skills. During the fall, we train new members, work on off-season projects, and prepare for the upcoming build season. The training is typically unique to each subteam. Our offseason project consists of building a robot with a mechanism that may be useful in a future FRC game, allowing all of our subteams to experiment and learn about something that we have never used before.

2.3.2 Empower

Poly Rabbotics continues to strive in connecting with the greater STEM community, promoting ideas of involvement/engagement in STEM-related fields; and investment in students' abilities to train the next generation of technical projects/innovations.

Through this, numerous outreach projects are being put forth, through involvement in volunteering at Cubberley High School and consistent demonstrations at locations including Boeing, local organizations, and community centers.

2.3.3 Excel

Through three years of experience, Poly Rabbotics has continued to progress in numerous facets/aspects of competition. We have been fortunate to win the First Power Up 2018 Rookie Inspiration Award for the Los Angeles Regional, the 2018 Score Fall Classic First Powerup Champions Award, and the 2020 Del Mar Regional Judges' Award. We have finished as finalists in the Los Angeles Regional, quarter- finalists in Los Angeles Regional, semi-finalists at Del Mar Regional, and ranked 14/67 at World Championships-Houston!

Moving forward, we continue to put emphasis on safety, community outreach, and the collective FRC environment; we look towards competing at a higher level and improving our opportunities, long-term.

3 Team Organization

3.1 Mentors

Our team consists of four total mentors, ranging from experience in professional companies such as Boeing and Northrop Gruman; teaching activities in high school and academia; and current undergraduate students. Mentors provide critical feedback towards numerous divisions on the team, while promoting a proactive and creative environment.

3.2 Student Leadership

3.2.1 Captainship/Core Leadership

The upper leadership consists of two co-captains, an Engineering Director, and Operations Director. These officers conduct oversight with regards to technical and business sides of our team, meeting with mentors and division leads on a weekly basis.

3.2.2 Division/Sub-Team Leadership

The sub-team leadership includes associations among two main aspects of the team; these include the technical and operational sectors. Within the technical divisions, there are leads among four main divisions: programming, electrical, mechanical/manufacturing, and computer-aided design (CAD). The operational divisions include marketing, media, art/merchandise, and financials.

3.3 Leadership Selection Process

All leadership selection happens in the same way. At the end of the school year, students will be asked to apply for leadership positions or nominate others who they believe are deserving of a position. The candidates, assembled from these nominations, will be interviewed by core leadership. Then, they will select a single lead or two co-leads for each leadership position.

4 Student Expectations

In order to remain a member of Long Beach Poly Rabbotics (Team 7042), all members must comply with the following guidelines and rules.

Registration:

- Students must comply with all guidelines outlined within the Team's Handbook, returning needed consent, and complying with all regulations/guidelines long-term.
- The registration process and further information is available at:

Grades:

- Students are expected to balance their team responsibilities with their school work. Schoolwork should be considered as a first priority, even before robotics. Students must perform at a high level in the academic scope, retaining, at a minimum, a "C" or above on transcript-related documents.
- If student(s) are struggling with their academic work, they can speak with Mentor #2, Al Shaheen, regarding further work balance.

4.1 Attendance Policy

4.1.1. Attendance Standards

Attendance is valued at a great level, with active member participation serving a critical role in the successful functions of the team. However, Poly Rabbotics does not serve as a replacement for academic curriculum or course work. If students carry alternative responsibilities and priorities, Rabbotics leadership is willing to advise, as necessary.

4.2 Codes of Conduct

4.2.1 During Meetings

Students are expected to not use their phones at team meetings or functions unless it is necessary for the work they are doing for their subteam or otherwise directed by student leaders or mentors.

Unacceptable behavior includes but is not limited to: playing games, using social media, or other distracting and unproductive tasks.

Students are expected to respect others at all times. They should follow the Golden Rule (treat others how you want to be treated) to help sustain our professional and respectful working environment.

To create a professional working environment conducive to new ideas and change, our team has a strict no bullying or harassment policy. This includes physical, online, or verbal bullying.

Students are expected to take initiative during team meetings. If they have nothing to do they should be seeking out tasks from their peers and leaders or mentors on the team.

4.3 Consequences

Initial violations of any of the above student expectations will result in a discussion with core leadership and the student being sent home. Repeat violations may result in the student being dismissed from the team.

5 Workplace Rules

- If you wish to borrow a piece of team equipment, ask the appropriate mentor in attendance and the leader of the subdivision that uses the equipment.
- Follow all safety guidelines and protocols. Use of team tools is a privilege, not a right, and safety is paramount. Do not use a machine or tool unless you have been trained and signed off to use that equipment.
- Return all tools and equipment to their given places.
- If a student leaves before a work session is over, they must give an appropriate amount of notice and obtain permission from core leadership and the relevant subteam lead. The student must also help clean up before leaving.
- Do not download or install programs onto the programming, CAD, or business/media computers without the permission of the respective team lead and a reason directly related to robotics or the team.
- Personal equipment brought to team meetings or events must be in compliance with all school rules. In particular, personal knives and multitools containing knives will not be allowed at team meetings or events. Violations of this rule will result in confiscation of the tool in question; repeated violations may result in removal from the team.

6 Travelling to Competition

6.1 Travel Team Criteria

All students who are participating in any competitions that are outside of LB Poly's direct jurisdiction, must comply with the following criteria with regards to guidelines/restrictions on travel.

When at competition, members must do as follows:

- Respect the other teams. Remember gracious professionalism, and always be respectful.
- Stay with the group. If you need to go anywhere, let a student lead or chaperone know and find a reasonable time to do so. If you're needed and you're not there, it will reflect poorly on you.
- Stay on task and fulfill your pre-determined role on the travel team.

6.2 Travel Team Roles

Poly Rabbotics heavily prioritizes the careful and dignified selection of designated, specific roles for the travel team. Higher leadership, based on member attendance; specific, underlying knowledge of certain mechanisms and procedures; and overall, comprehensive capabilities, will select the role per each individual on the travel team.

Under normal conditions, the travel team consists of the following main, integral roles:

Drive Team

1. Two Drivers: these may be rotated/adjusted, as needed.
2. Technician: this role is fulfilled by an individual and/or individuals (with appropriate rotation) who commit to regular technical responsibilities and have extensive knowledge on the functionality of the robot.
3. Human Player: this is a role in which numerous members can fulfill the responsibilities of.
4. Coach: this is selected based on mentor attendance.

Pit Crew: Members of the pit crew (size relative to the scale of competition) are selected based on build season attendance, engagement, work/responsibilities on robot fabrication, and overall construction.

Scouting: The scouting team is determined under the discretion of the scouting leads. Scouting leads are determined under the guidance of mentors and higher leadership. We encourage a healthy portion of members to have basic experience with scouting.

Even if members are not given specific roles, we do encourage competition experience. If the team has sufficient funds and resources, we will promote attendance at major events.

7 Parent Volunteering

7.1 Donations

LB Poly Rabbotics is always open to donations from parents, mentors, and other respective relatives. We are in need of meals, snacks, cleaning equipment, safety equipment, and additional resources, as necessary.

7.2 Volunteers

7.2.1 Food

During the build and competition season, we work through lunchtime on weekends and, near the end, may pull extended hours that require a dinner break. Food is provided by the parents, homemade meals of some sort or store bought. A sign-up will be available and organized through parent volunteers. Guidelines for when to bring the food will be provided.
https://www.signupgenius.com/go/60B0E48A8A92FA5FD0-team

7.2.2 Chaperones

On away trips, we will need chaperones. Chaperones will be adults, usually parents, who are affiliated with the team. Chaperones coordinate with core leadership to organize the trip, manage the logistics of hotels and food, and oversee all of the students.

7.2.3 Transportation

Transportation to competitions outside of the direct jurisdiction of the Long Beach area are organized through the use of carpools and respective drivers. These carpools are closely regulated, and drivers are all required to fill out extensive liability forms.

8 Meetings

8.1 Meeting Schedule (2019-2020 AY)

8.1.1 Offseason: May-Mid December

During the offseason, members are expected to attend meetings held MW 3:00 PM-6:00 PM and Saturday 9:00 AM-1:00 PM. These meetings are mainly used to introduce new members to the numerous facets/aspects of engineering, science, mathematics, and technology; engage members in the complexities and goals of FIRST/FRC; and to further improve communication, business, and logistical knowledge, collectively.

After the initial offseason competition, the workshops were framed towards preparing members for the strenuous associations of build season. These meetings were held in the Poly Rabbotics Room from 3:00 PM-6:00 PM.

8.1.2 Build season: Early January - Mid February

Meetings were held on Mondays, Wednesdays, and Thursdays from 3:00PM-9:00 PM, with meetings also being held on Saturday from 9:00AM-4:00PM.

8.1.3 Competition season: Mid February – Late April

During competition season, meetings are expected to occur once/twice a week, MW, 3:00 PM-6:00 PM. The central role of these meetings is to prepare for upcoming competitions, continue maintenance initiatives on robot, and allocate responsibilities for students during competitions to be attended.

8.1.4 Calendar: Major Events/Competitions

Summer Bridge 2020
July 06 - August 12 Monday/Wednesday 3:00 - 5:00 PM
Via Zoom (video conferencing)

9 Waiver and Release of Liability for the use of Tools and Fabrication Lab

10 Student Media Authorization and Release

11 Contract and Final Notes

Here is the contact information for the 2020-2021 core leadership.

Hamid Torabzadeh (Co-Captain): hamidtorabzadeh.polyrabbotics@gmail.com
Garrett Schnack (Co-Captain) garrett.schnack1@gmail.com
Nicole Lopez (Operations Director): Lopezn859@gmail.com
Miguel Saenz (Engineering Director): saenzm4307@gmail.com

We expect all team members to follow and understand all rules and policies in this handbook. The leadership team reserves the right to set consequences for major violations and consider confidential information in decisions.

In addition, core leadership reserves the right to change the handbook during the season. If this occurs, the team will be notified of the modifications promptly.

We are looking forward to a productive, prosperous upcoming season. Go Poly Rabbotics!

FRC Team #7042: Long Beach Poly Rabbotics Student Contract

Please fill out and return along with 9 (Waiver and Release of Liability for the use of Tools and Fabrication Lab) & 10 (Student Media Authorization and Release).

By signing below, I, the student, agree with the following:

- I have read and understood the 2010-2021 Poly Rabbotics Handbook, especially the student expectations (4) and workspace rules (5).
- I understand that to be considered a team member of FRC Team 7042: Poly Rabbotics, I must follow and fulfill the criteria outlined in Section 4.
- I understand that not everyone will be able to travel to "away" events and will agree to abide by the travelling team criteria (6).
- I have read and understood the Waiver and Release of Liability for the use of Tools and Fabrication Lab (9) and Student Media Authorization and Release (10).
- I will behave in a responsible, mature, and graciously professional manner while on or representing the team.
- I understand that I can bring problems to the attention of team leadership to work it out.

Student (print name)	**Signature**	**Date**

By signing below, I, a parent/guardian, agree with the following:

- I have read and understood the 2020-2021 Long Beach Poly Rabbotics Team Handbook, including the Parent Volunteering (7). I understand what is expected of me as a parent of a team member, outlined in that section.
- I understand that for my child to be considered a team member of FRC Team 7042: Poly Rabbotics, they must follow and fulfill the criteria outlined in Section 4.
- I understand that not everyone will be able to travel to "away" events and will agree to abide by the travelling team criteria (6).
- I have read and understood the Waiver and Release of Liability for the use of Tools and Fabrication Lab (9) and Student Media Authorization and Release (10).
- I understand that my child is expected to be respectful, mature, and responsible for themselves. If they have a question or concern about the team, I can let them interact with team leadership for themselves.

Student (print name)	**Signature**	**Date**