



ΤΙΤΑΝΒΟΤ 2543

2019-2020

TEAM

MANUAL

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1. Introduction

1.1 What is FIRST?

For Inspiration and Recognition of Science and Technology

The mission of FIRST is to inspire young people to be in Science, Technology, Engineering, and Mathematics (STEM) fields as leaders by engaging them in exciting programs that builds their skills for the future. It inspires innovation and fosters well-rounded life skills, including self-confidence, communication, and leadership (firstinspires.org).

FIRST consists of 4 different programs for different age groups. TitanBot is an FRC (FIRST Robotics Competition) team, which is the program's highest level.

- FLL Jr. (FIRST Lego League Jr.)
 - Grades K-4
- FLL (FIRST Lego League)
 - Grades 4-8
- FTC (FIRST Tech Challenge)
 - Grades 7-12
- FRC (FIRST Robotics Competition)
 - Grades 9-12

FIRST pushes the idea of **Gracious Professionalism** and **Coopertition**. These ideas were coined by Woodie Flowers, one of the co-founders of FIRST.

- **Gracious Professionalism**
 - An attitude that encourages and fosters high quality work, especially in a competitive environment. Students are encouraged to have integrity, be sensitive, and evidently, be gracious and professional.
- **Coopertition**
 - This is accomplished when displaying kindness and respect in the face of fierce competition. Teams should work together during competitions, rather than against.

1.2 Who are we? 2543!

TitanBot, Team 2543, graciously accepts your membership. Members of TitanBot leave with real world skills, not only within engineering, but also include public speaking, business, leadership, and more! TitanBot upholds the Core Values expressed by the FIRST philosophies of Gracious Professionalism and Coopertition.

- Discovery - We explore new skills and ideas; what we discover is more important than what we win.

- Innovation - We use creativity and persistence to solve problems.
- Impact - We apply what we learn to improve our world.
- Inclusion - We respect each other and embrace our differences.
- Teamwork - We are stronger when we work together. We do the work to find solutions with guidance from our coaches and mentors; we all learn together.
- Fun - We enjoy and celebrate what we do.

Team 2543 is a team, but above all, a family. TitanBot strives to make their environment comfortable and a safe place for all members.

1.3 Team Structure

Our team has been run with a business-like structure since 2011, with recent modifications to accommodate for our growing team. TitanBot has grown to nearly 70 active participants and our structure ensures that each student has a place on the team.



2. Students

2.1 Behavioral Expectations

2.1.1 Rookie Members

We are so excited that you are interested in joining TitanBot. Like many other teams, we expect certain behavioral standards to be met. Through this guided experience, we look forward to helping you find your passion within the club and create new friends.

2.1.2 Returning Members

As returning member of TitanBot you are seen as an example to the underclassmen and rookies. With this in mind, we hold you to higher expectations. Being a returning or more experienced member does not excuse you from the same behavioral guidelines new members are held to. This includes and especially applies to all members of the leadership team. Failure to cooperate may result in changes to your position on the team.

2.1.3 10 Ups (Adapted from Team 1678)

- Show Up:** I will attend our meetings and events as often as my schedule allows.
- Speak Up:** I will actively participate in team discussions, and share my ideas.
- Listen Up:** I will respect others opinions and ideas, and pay active attention when I am prompted to.
- Smarten Up:** I will seek out opportunities to learn whenever possible.
- Step Up:** I will take initiative in all areas possible in the team.
- Grow Up:** I will be treated as an adult so long as I act with the maturity of one.
- Clean Up:** I will always clean my workspace BEFORE leaving the IT building every day.
- Hurry Up:** I understand that time is limited, and will work with urgency and accuracy.
- Live It Up:** I understand that robotics is fun at its core, and will enjoy my time here.
- Never Give Up:** I am unafraid to make mistakes in order to grow.

2.1.4 PDA Policy

Although robotics is a fun and friendly environment, students are expected to behave and interact in a platonic and professional manner. Public Displays of Affection, such as intimate touching and kissing are prohibited. This is also expected whenever representing TitanBot (i.e., in the workshop, at events, away trips, and competition).

2.1.5 Strike System

In order to ensure that our students are active participants and behaving appropriately, we have created a strike system. Students are expected to follow the guidelines in this manual and will face consequences if not upheld. First strike breakage will result in a warning. For every strike a student receives, an email will be sent out to parents to notify their behavior. Receiving 3 or more strikes will result in ineligibility to attend away regionals unless their parent or guardian chaperones for the trip. Leadership, parents and mentors will report infractions to the CEO, HR director, or to Mr. Foust to record.

Strikes will be given for the following:

- Repeatedly being off task (i.e. playing video games, using social media)
- Operating a power tool/machine without proper training
- Behaving in a risky or unsafe manner in the workshop
- Purposefully mishandling tools in the workshop
- Disrespecting mentors, parents, leadership, or other teams
- Bullying/harassing other students
- Lying on or manipulating attendance sheets
- Repeated PDA policy violation
- Breaking curfew or other guidelines on an away trip
- Excessive spamming in the WhatsApp Communications

2.2 Student Leadership

TitanBot is a primarily student-led organization and we rely heavily on our student leaders for communication across the team and for decision making. Our leadership consists of 11 students representative of our 9 departments (See Section 1.3), extended leadership includes managers directly in charge of sub-departments. These department leads have demonstrated exceptional knowledge and initiative within the team and should be treated with respect when called for. Our leadership team's goal is to teach students the skills to be knowledgeable and proactive members of the team. In order to do so it is necessary that leaders are respected and are taken seriously by their peers.

To be accepted on the leadership board, there is an application process followed by an interview. CEO is selected solely by outgoing CEO and Mr. Foust. The selection of leadership is done privately between incoming CEO, outgoing CEO, outgoing director of the applicant's department if appropriate, and Mr. Foust. All leadership positions are announced between the last regional competition and the end of the year banquet.

2.3 Participation

Due to the rigors of TitanBot's activities, participation is taken very seriously on the team, and can affect areas of activity within the team. Students are expected to show their dedication through their productivity on the team, and participation is one way to measure this.

Present: Members are on time and are active participants on the team.

Absent Notified: Members will notify their department lead and Mr. Foust at least 24 hours in advance for an absence. Upon return, members are responsible for catching up on work they missed from their absence. When the work is submitted, the absence will no longer count negatively towards their attendance.

Absent Unnotified: Members are still expected to catch up on all material they missed upon return. However, without advance notification, students will not have the opportunity to make up their attendance.

2.3.1 Seventh Period - CTE Robotics Engineering

Those enrolled in the seventh period are club members who wish to receive academic credit for participation in TitanBot. Attendance for the entirety of seventh is required by school and state law, students will be marked truant if found absent without valid reason. A student's grade in the class will be counted towards their GPA just as any other class. Grades are determined via Google Classroom assignments (as well as by tests, participation, and evaluations) and should be taken seriously.

2.3.2 Outreach Events

TitanBot hosts a number of events aiming to spread the message of FIRST and benefit the community. Members are asked to volunteer for all outreach events. Members will be expected to represent the team in an appropriate manner and have fun running a great event. Local or large events (such as GIRLS Conference and the FLL Qualifying Tournament) demand the participation of all available members. Members are also encouraged to help in the planning and execution of these events.

2.3.3 Required Participation

In order to be eligible for build team or other specialized teams, members must:

- Support AT LEAST TWO of our team events
- Mentor or support an FLL team and/or the Eastlake Middle VEX team.
- Attend CPR/AED training (unless you are already certified).

2.4 General Safety

As a robotics team, we work in an environment where hazards are a daily encounter. To ensure the safety and the health of all of our members, we have strict rules that all members must follow. Failure to comply with rules will result in a strike. Before any member is allowed to enter the workshop (without supervision) and operate tools, a safety packet must be signed and turned in.

2.4.1 Workshop Etiquette

- Safety comes above all else.
- No horseplay in the workshop.
- Always wear adequate Personal Protection Equipment (PPE). (See 2.4.2)
- Use all tools and materials properly.
- Be aware of your surroundings and actions.
- Never do anything unsafe in order to get the job done.
- When using a high risk tool notify an experienced member
- Do not remove or disable any safety device.
- Never operate a piece of equipment unless you have been trained and or authorized.
- Obey all safety warning signs.

2.4.2 Personal Protective Equipment

In addition to always wearing safety glasses in the workshop, eye protection must also be used in the following situations: when performing any work on the robot and when there is a risk of exposure to flying particles. Gloves are also needed for mechanical work.

- Prescription glasses must have safety glasses over them
- If you wear marked safety rated prescription glasses, you may wear safety rated side shields (You CANNOT use homemade side shields)
- Please have your own set of clean and rated safety glasses (a limited amount of loaners are available)
- Gloves as necessary
- Hearing protection as necessary

2.5 Dress Code

2.5.1 Workshop Attire

- Always wear closed toed shoes
- Wear clothes that cover your arms and legs whenever possible
- No loose jewelry
- No loose clothing
- Keep long hair tied back

2.5.2 Competition Attire

General Attire

- Black jeans
- Designated TitanBot shirt
- Designated TitanBot jacket (optional)
- Comfortable closed toed shoes

Pit Attire (includes general attire)

- NO loose clothing or jewelry that may be easily caught in machines
- Tied back hair
- Safety glasses

Even if you are not expecting to work in or to be called to the pit, please be prepared with your own PPE. We do not own enough loaners for the whole team, and borrowing from the competition is a bad reflection of our safety preparation. All Pit Attire guidelines apply for all members, even if it is only for a short visit. You will not be allowed to enter the pit area without safety glasses.

2.6 Build Season

2.6.1 Build Team Responsibilities

Before Build Season, engineering leadership will form a roster of about 20 members as our Build Team for the upcoming season. Build Team members are chosen by leadership based on training attendance, mastery, and overall dedication to the team. Build Team members are expected to stay after school until 7-9pm on weekdays and to work on weekends throughout Build Season. Poor attendance, unproductive behavior, or slipping grades can cause a member to lose their position on Build Team if leadership deems necessary.

2.7 Specialized Sub-Teams

For students who go above and beyond in their participation on the team: we have specialized teams, which give students a more challenging and involved role. If you are interested in being part of leadership, getting involved in these sub-teams will help improve your skills. TitanBot values students' grades and future over all else, thus these are an option for those who would like an additional challenge. To join and remain on these teams, students will require a 3.0 Weighted GPA.

Spirit Squad

A position in this sub-team allows members to assist in activities, bonding events, and competition preparation. In addition there are going to be "Squad Leaders" in charge of specific tasks. Sign ups are posted and members are chosen by the spirit directors during second semester.

Medics

The Medics help our safety captain keep members safe. They will assist in keeping our workspace safe, tending to injuries, and informing other about safety. They will be more highly trained in First Aid, and CPR. Medic trainings will occur throughout the first semester, with several opportunities to take First Aid and CPR classes.

Pit Crew

This team is in charge of making sure the robot is at its full potential in competition. These positions have shifts between the morning and afternoon,

switching around lunchtime, and will be open to sign up in September in preparation for Battle at the Border (off-season competition).

Drive Team

The drive team (comprised of a driver, operator, coach, human player, and technician) is directly responsible for everything on-field during a match. For more information on each role, refer to the game manual, posted on the FIRST website. After evaluation, a team will be chosen for regionals. Although it is not required, engineering experience plays a key role in drive team participation.

Scheme Team

This is a specialized team that is focused on competition strategy and robot design (in accordance to the annual game). They help create tactics with other teams and relay them to the coach to optimize match play. Selections and sign ups for this team will occur in September, as well in preparation for Battle at the Border.

Build Team

This is the main team in charge of conceptualizing, building, and executing the robot design during build season. Usually, this team has around 20 members and requires an initial minimum of 3.2 for sign up and consistent 3.0 once accepted. Not being on build team does not exclude anyone from working on the robot, however, privileges and expectations like working in the shop later are given to Build Team members. For more information, please refer to Section 2.6- Build Season.

2.8 Competition Guidelines

2.8.1 General Guidelines

At competitions, members should always:

- Respect the other teams and their members. Keep **Gracious Professionalism** and **Coopertition** in mind at all times. Remember, you represent TitanBot.
- Stay with the group. If you need to leave the competition venue, let a chaperone know and find a reasonable time to do so. If you're absent when you are needed, it will reflect poorly on you.
- Stay on task and fulfill your role on your specialized sub-team or as a scout (2.8.3).
- Follow the Dress Code outlined in Section 2.5.

2.8.2 Pit/Field Guidelines

In the pits and field, members should always:

- Be on time for your shift!
- Avoid lingering at the pits.
- Wear PPE at all times! You will not be allowed in the pit without it. (Refer to Section 2.4)
- Returning members assigned to the pit should be ready to lead the group when talking with judges, other teams, or pit guests. These team representatives should be familiar with and be able to speak about TitanBot.

- All members assigned to the pit should be able to answer all questions from judges, other teams, or pit guests to the best of your ability. If you can't answer the question, redirect them to a more knowledgeable member.

2.8.3 Scouting

The Scouts are in charge of recording information during competition matches from the stands. All information from scouting will be *crucial* during alliance selections prior to playoff matches, and is therefore imperative that everyone on the team does their part in scouting. Anyone not in active drive team, pit crew, or busy with another *specific* task will be a scout at competition. We do this via our online app ScoreBot (credit: Scott Way).

2.9 Away Trip Guidelines

To be eligible for away trips:

- Students must be an active participant in their chosen department
- Students cannot have more than 3 strikes (unless a parent/guardian chaperones for the trip)
- GPA requirement: 2.0 (weighted)
- Must be part of a department & its Google Classroom
- Student must have volunteered for at least one outreach event

On the trip:

- Each student has the expectation of fulfilling their respective duties during away trips
- Each student will be accountable to the team and the chaperones
- Rookie members are expected to listen to the directions given by experienced members
- Students will stay with their assigned vehicles and rooms. Switching is prohibited unless directly approved by Mr. Foust
- Leaving your room after curfew is strictly prohibited, unless directly approved by Mr. Foust or your direct chaperone
- There must be at least 4 people present with the door propped open or a chaperone present when there are mixed genders in a hotel room.
- *All members represent the team*
- If these guidelines cannot be upheld, the student may not be able to attend the next away trip

3. Parents

3.1 Booster Club

TitanBot has a parent-run Booster Club (Eastlake Robotics Booster Club) which helps handle the donations and grants that we receive. There are four board members in the Booster Club: president, vice-president, secretary and treasurer. The Booster Club is an

essential part of running the team, and we cannot function without the help and support of all of our parents. We ask that all parents join the booster club in order to give our members the best opportunities possible. There are few commitments to joining, and does not require any paperwork.

3.2 Build Season

Build season takes place from early January to late February. This is the time period where teams from around the world are given that year's challenge and are allowed to begin constructing their robot. During this time, Build Team members are expected to stay after school until roughly 9pm every weekday, as well as come in on weekends. Since the expectation for these students is to stay late every day, we create a food list in collaboration with the Booster Club in order to support our meals. Each build team member will be partnered to bring food two or three times during the season. Although students are expected to stay late, we understand that grades come first and encourage students to take a break to focus on their classes as much as necessary.

3.3 Carpooling

In order to transport all students to our regional competitions and events, we ask that parents help us with carpooling. If a parent is willing to help with this, it will cost them nothing, as all gas expenses are paid for by TitanBot. It is a great opportunity, being able to travel with the team and watch students compete.

3.4 Donations

Running a robotics team requires a lot of funding, so any donations made to the team are appreciated, including any tools or supplies that may not be in use. We are a 501(c)(3) nonprofit organization, and all donations with receipts are tax deductible. As we are a nonprofit, using the link below will allow you to donate a part of all purchases on amazon to TitanBot (with no additional cost to you).

Amazon Smile: smile.amazon.com/ch/45-3973984

4. Mentors

4.1 Parent Volunteers

Our mentors are a very valuable component of our team and allow us to pass down skills as students graduate. We will often ask our parents to volunteer for our events and within departments. Mentors do not need to have an engineering background and are welcome to help in any department. If you are willing to mentor for the team, please let us know and we will work with your schedule.

5. Sponsors/Fundraising

5.1 Company Sponsors

Throughout the year we apply for numerous company grants and sponsorships in order to fund our team. A key aspect of many of these grants is having a contact that works at said business place. Because of this, we ask parents for their support in asking their workplace if there are any grants available to apply for.

5.2 501(c)(3)

TitanBot is a 501(c)(3) non-profit organization, meaning that donations granted to TitanBot are tax-deductible. This is a must-have to apply for grants at most companies, as well as allowing parents to more easily donate to TitanBot.

6. Communications

6.1 WhatsApp

WhatsApp is our main form of team communication. It includes chats that have important announcements, as well as being an open outlet for students to ask important and relevant questions.

TitanBot Communications:

Chat participants include parents, mentors, and students. The primary purpose for this chat is to post important announcements that all members, including parents, should be aware of. *Especially* in this chat please refrain from spam, or unnecessary comments and only ask questions that are relevant. Profile names **MUST** be or relate to your actual name and **MUST** be appropriate.

Link: <https://chat.whatsapp.com/5vPPysuRPGCF7mRcodALlb>

6.2 Band App

Join the Band, man! This year, we plan to use the Band App for announcements, event updates, and calendar distribution. It is available online through a web browser or through its mobile app. Students are responsible for checking all updates and announcements published on the Band App, and to ensure they do not spam or misuse the app.

6.2 Email List

In the membership profile, make sure to include your personal email as well as parent emails. We use emails as a form of communication to announce important events and schedule changes. Once you join TitanBot, you will also be given your own personal team email, that allows you to participate in certain online team documents and activities, please refrain from any inappropriate activity.

6.3 Calendars

The calendar will be available to both parents and students through email or band app. Most of the information given will be set but it is possible that certain information may be changed, which is why there will also be an interactive calendar that is frequently updated.

7. Forms

7.1 Membership Profiles

7.2 Safety Packet

Annual FIRST registration and media waiver

Completed first semester before build season

By signing below, I understand and agree to the following:

I have read the entirety of the 2019-2020 team handbook.

I will uphold the values of FIRST and TitanBot both in the classroom and out.

I represent the team when I wear team merchandise, or travel with the team and will not misbehave, as it will reflect badly on me.

I will be an active participant in at least one department of the team.

I will have safe and controlled fun with the team.

This form must be signed and returned by Wednesday, August 7.

Student Name (Print):

Student signature:

Date:

Parent signature:

Date:
