Tech Ninja Team

FTC#9929

Team Handbook

2022-2023

Change Log

Version / Date	Change
1.0 - 2017	Initial Version
1.1 - 2018	Added roles, power tool safety training
1.2 - 2019	Transportation to/from events, buddy system
1.3 - 2020	Expectations for Team Members
1.4 - 2020	Interns, "Open Doors" Policy, COVID-19 Procedures, Listing Team Values

Introduction

This handbook is designed to provide an understanding of the FIRST Tech Challenge (FTC) program, the Tech Ninja Team, and the rules and guidelines that all team members are expected to follow. Please review all of the information very carefully. If you have any questions that have not been covered by this handbook, or if you have questions with any other topic, please contact a team mentor. Please keep this handbook handy for future reference.

What is FIRST and the FIRST Tech Challenge?

Founded by inventor Dean Kamen in 1989 and based in Manchester, NH, FIRST (For Inspiration and Recognition of Science and Technology) is a 501(c)(3) not-for-profit public charity designed to inspire young people's interest and participation in science and technology, and to motivate them to pursue education and career opportunities in STEM fields.

FIRST reaches nearly a half million students globally through robotics competitions in 4 divisions, FIRST Robotic Challenge (FRC), FIRST Tech Challenge (FTC), FIRST Lego League (FLL) and FIRST Lego League Jr. (FLL Jr.).

The Tech Ninja Team competes in FTC as well as hosts FTC meets and qualifiers. FTC teams (10+ members, grades 7-12) are challenged to design, build, program, and operate robots to compete in a head-to-head challenge in an alliance format. Participants call it "the hardest fun you'll ever have!" Guided by adult mentors, students develop STEM skills and practice engineering principles while realizing the value of hard work, teamwork, innovation, and sharing ideas. Teams also must raise funds, design and market their team brand, and do community outreach for which they can win awards. Participants have access to tens of millions of dollars in college scholarships. Each season concludes with Super-Regional Championships and an exciting FIRST Championship.

About the Tech Ninja Team

During our first FTC season, the team members were excited to unpack their first robot kit. One of our team members joked "Just wait until we unpack the ninjas!". Thus the Tech Ninja Team was born, along with a cool acronym (T.N.T).

The Tech Ninja Team exists to:

- Grow an appreciation for science, technology, engineering and math in students who participate as well as in our community at large.

- Prepare students for real-world technical careers – technology, design, production, teamwork, project/time management and strategic thinking.

- Provide opportunities to work with processes and techniques that are used in industry.

These goals are accomplished through the team's efforts to field a competitive robot that can compete for an FTC World Championship.

Team History

The Tech Ninja Team started with a core group of students who created a Rube Goldberg machine in the spirit of the International Rube Goldberg Machine contest in the spring of 2014. Later that year, these students formed two FIRST Lego League teams with a number of their friends. The next year, the older students formed a FIRST Tech Challenge team, named it the Tech Ninja Team, and competed in the 2015/2016 FIRST ResQ season. While the Tech Ninjas are a newer team, they have already had some notable achievements:

- 2015/2016 – Picked as an alliance partner for the finals and runner up for the PTC Design Award at the Highland Park Qualifier

- 2015/2016 – Won the Control Award for their robot *Skittlebot's* control system at the CMSA Qualifier for FIRST ResQ

- 2016/2017 – Finalist at the league qualifier in Batavia, finished first in their division and 6th out of 36 in their league for Velocity Vortex

- 2016/2017 – Hosted two league meets

- 2017/2018 – Hosted two league meets and the league qualifier

- 2017/2018 – Match high scoring alliance, 2nd-place Inspire Award, Control Award, winning alliance at League Qualifier, and progressed to the Illinois State FTC Championship for the Relic Recovery season.

- 2018/2019 – Hosted two league meets and the league qualifier

- 2018/2019 – Match high scoring alliance, Inspire Award, Winning Alliance 1st pick, 2nd-place Control Award, 2nd-place Design Award, 2nd-place Think Award, 3rd-place Motivate at League Qualifier and progressed to the Illinois State FTC Championship for the Rover Ruckus season.

- 2019/2020 Inspire Award, Control Award 2nd Place, Design Award 2nd Place, Winning Alliance 1st pick at the Illinois Southern Suburbs League Qualifier. Progressed to the Illinois State FTC Championship for the Skystone Season.

- 2020/2021 Inspire 2nd, Think Award in Chicago League Tournament. Progressed to the Illinois State FTC Championship for the Ultimate Goal season.

- 2021/2022 2nd Alliance, 2nd pick at South Suburbs League Tournament

Team Values

The team has developed a set of values to guide their day-to-day activities:

- Act now, iterate
- Nail the basics
- Expect and embrace change
- Take risks, don't panic
- Own without ego
- Earn trust, give trust
- Take pride in your work (mistakes are ok)
- Always be in it for the team
- Work efficiently
- Be here and be positive
- Communicate effectively

Open Doors Policy

The Tech Ninja Team believes that our "trade secrets" are the journey of discovery we've made, how we work together, and commitment to our shared goals. We freely share what we've learned along the way with our fellow FTC teams – we make our engineering notebooks and our source code publicly available, our workshop is open to any team that wants to use our tools or field, and we assist other teams to solve problems they encounter at FTC events.

Team Mentors

The team mentors are responsible for directing and guiding the team. They come from varied backgrounds, bringing real-world experience to the team. Mentors are screened through FIRST's Youth Protection Program. As of the 2022/2023 season they are:

Mark Matthews
Jeff McClain
Cameron Nelson
Rick Uecker

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General Information

Behavior

It is important that all team members realize that whenever they are engaged in a team-related activity – at a tournament, at an outreach event, using social media, whether online or in-person, they are representing the Tech Ninja Team. Their words and actions reflect not only on the Tech Ninja Team, but the team's sponsors and the Homewood/Flossmoor community. Tech Ninja Team members must treat their teammates, members of other teams, FIRST volunteers, Homewood Science Center staff and the public with respect, kindness and gracious professionalism.

At competitions, parents and friends of Tech Ninja Team who are cheering us on or representing the team in any other way must adhere to this guideline as well.

We Are a Team

"Team". It's part of our team name. Any successes or failures are a result of a team effort. Always be thinking about "What can I do right now to help TNT succeed?". In FIRST, individual successes are rarely celebrated. What is celebrated is what teams accomplish.

No sub-team stands alone in the Tech Ninja Team – we all depend on each other. Some examples include:

- The drive team depends on the build team to deliver a robust, mechanically sound robot, the programming team to deliver control systems that work reliably and the scouting team to provide sound strategies.

- The business development team acquires funding to build the robot, but cannot do so without a robot built by the build team, and programmed by the programming team that they can use to demonstrate to potential sponsors.

Parents

Parents are an integral part of the success of The Tech Ninja Team. They are also a key factor in the motivation of our team members. The team strives to keep an open communication channel with parents. If you have any concerns do not hesitate to contact a mentor.

Illness

If a team member is sick, they should avoid attending meetings. Team members work in close proximity and share tools. If team members are sick, they should be respectful of others' health and stay home. We will make sure that absent team members are kept informed of what is happening with the team in their absence. Team members who show up sick to meetings will be signed out and sent home. For the 2022/2023 Season, refer to the included COVID-19 policy for more details.

Submissions and Publications

To maintain team standards and expectations, mentors must approve any documents or media relating to the team prior to release. This includes publicity materials, press releases, award submissions and social media posts through our official channels.

The Decision-Making Process

While the Tech Ninja Team is providing a learning environment through FTC, team members, parents and mentors should also be aware that we are a competitive team. Not every idea, design or thought may be realized. The team *will* listen, respect and consider every idea presented, but not all can be put into practice.

Mentors are always responsible for ensuring that decisions about robot design, workload, roles and sub-team makeup, etc. are made in the best interest of the team as a whole. Rationale for why decisions were made will be recorded in the engineering notebook.

Sub-teams and Roles

A successful FTC team requires a multitude of skill sets. The Tech Ninja Team has defined roles for team members who have or want to learn these skills – some roles are more involved than others but team members will usually find themselves fitting into more than one. Mentors and veteran team members will either provide instruction or help team members find resources to learn or become better at the skills in their chosen roles. It is expected that team members may be required to spend some personal time outside of team meetings doing the learning on their own.

Strategy Sub-team

To succeed in FTC requires more than technical aptitude. It also requires a successful strategy to do well in the game. All team members participate in the strategy sub-team. Initial work on a game strategy occurs at kick-off when the FTC game is revealed in early September. Further strategy work happens based on what we observe during the league meets leading up to qualifiers.

Build Sub-team

Members in this sub-team work with mentors to design and build robots to compete in the FIRST Tech Challenge (FTC) competition. After the team produces a strategy based on the game reveal in early September the robot is designed using computer-aided design and built with metalworking equipment. The robot will compete at its first event in early November at a league meet, and the design will have many iterations based on its performance during the subsequent 2 league meets that happen in early December and mid-January.

Software and Controls Sub-team

Members in this sub-team write software for the robot in Java using Android Studio and the FIRST FTC software development kit. This software is used for both the autonomous and driver-controlled functionality of the robot. In the process of developing the software for the robot,

team members will learn professional software development practices, control system theory and learn and apply mathematical concepts from algebra, trigonometry and calculus.

Drive Sub-team

Drive teams consist of three team members; a driver, an operator and a match coach. Each season, the team will field a primary drive team, and at least one backup drive team. Members wishing to be on a drive team must pass a written test of the current season's game rules with a 90% grade (the test can be re-taken as many times as necessary). Potential drive team members must choose a specialty (driving, operating, coaching) and will be put through a series of practical tests using a practice robot or prior season's robot to determine their fit for their chosen specialty. The primary and backup drive teams will be identified by the team as a whole, based on their ability to perform – which is directly related to the effort they put into practicing and working together.

Drive team members must be extremely dedicated. They will put in many extra hours above and beyond their expected efforts in other roles, practicing with the robot and their team. As the season progresses, they will also be expected to arrange practice times with their specific drive team. Drive teams that know the robot and the game like the back of their hand, and that have built trust as a group will deliver the best performances at FTC competitions. Being individually adept at any of the driving skills will not lead to the team winning matches.

While the drive team is "on stage", they are not solely responsible for winning or losing matches. The drive team is supported by teammates in the pits keeping batteries charged and fixing mechanical issues with the robot, the scouting team delivering match and alliance strategies to the drive team as well as the rest of the team in the stands cheering them on.

Roles

Team Roles are positions that focus more on specific tasks on the team. Each role is filled by one team member. To obtain a role, a team member must apply by sending an email to Mr. Matthews or Mr. Nelson and be interviewed by the mentors.

Notice that each role description includes the word "responsible". This does not mean that the person in the role is doing the work - it means they are making sure the work gets done – by planning, organizing, encouraging and sometimes stepping in and directly doing the work. The roles are designed to not require 100% dedication - but extra work outside of normal meetings may be required, and if someone with a defined role has no other pressing tasks during a meeting they should consider working on tasks required by their role.

CAD Director

The CAD Director is responsible for making sure that the CAD models describing the robot are complete and up to date. CAD models are important for the build sub team as well as providing documentation of the process to be used in the team's engineering notebook.

Documentation Director

The Documentation Director is responsible for making sure there is content available for the engineering notebook. Content includes pictures of the build process, notes about decisions made during the build process, and a list of the work that was done at each meeting.

Drive Team Trainer

The Drive Team Trainer is responsible for working with the drivers and coaches to produce drive teams that are ready to compete with the team's robot. This includes scheduling and running drive team practices, working with drive team members to devise match strategy, and build and maintain a drive team evaluation system.

Electrical and Controls Director

The Electrical and Controls Director is responsible for working with the build and software sub-teams to ensure we have the needed motors, servos, wires and sensors and supporting code to field a competitive robot. They are also responsible for these components being robustly and neatly installed on the robot.

Engineering Notebook Director

The Engineering Notebook Director works with the CAD Director and Documentation Director to assemble the team's engineering notebook. The person taking on this role does not author the content for the engineering notebook singlehandedly, they are the editor - the team requires all team members to produce engineering notebook entries for every meeting.

Finance Director

The Finance Director is responsible for managing the team's budget, working with current and potential sponsors, and helping to plan fundraising events.

Inventory Director

The Inventory Director works with the build sub-team, the CAD Director and the Electrical and Controls Director to keep materials and tools on hand for assembling the robot. This role also works with the Finance Director to keep the budget up to date as materials and tools are purchased.

Marketing Director

The Marketing and Outreach Director is responsible for maintaining the team's public image. This includes planning the social media calendar, marketing our robot for tournaments, overseeing the design of fan gear, making buttons, and maintaining the team's style and identity standards.

Operations Director

The Operations Director is responsible for making sure the competitions (league meets, qualifiers, tournaments, etc.) run smoothly for the team. Tasks include: creating and executing checklists for tools, materials, and other necessities required for competitions, pre-competition scouting, and planning judging presentations.

Outreach Director

The Outreach Director is responsible for developing activities that bring the things that excite us about FIRST, FTC and robotics to our community. They help plan events, make sure they are staffed and collect feedback so that we may continually improve these events.

Safety Officer

The Safety Officer is responsible for making sure the team stays safe at the workshop and at matches. This includes working with mentors to create safety training for the team's tools, maintaining the current safety training status for all team members, and ensuring that safety glasses are worn at all times.

Workshop and Pit Director

The Workshop and Pit Director is responsible for making sure that our home workshop, and the pit workshop stay clean, organized, and are used efficiently - keeping team members focused on the task at hand by finding tools and parts to build or repair the robot, and helping the documentation director keep track of what happens at each meeting or match.

Joining the Team

The Tech Ninja Team is limited to 15 students. Other than the age requirement (entering grades 7-12) no prior experience is necessary. However, team members are expected to be hard-working and dedicated to the mission of the team. Interested students are invited to attend and participate in activities held during the FTC off-season which runs from May through the end of August. Students are encouraged to talk and work with the prior season's team members and learn about all aspects of the team.

Prospective members must then submit an application by September 1st describing their experiences during the off-season and why they want to be on the team.

Members from the prior year's team must let Mr. Matthews or Mr. Nelson know of their intent to return for a new season by September 1st.

Following the announcement of the team roster, new and returning team members must turn in the completed contract at the end of this handbook to Mr. Matthews or Mr. Nelson.

We welcome highly motivated students who do not meet the age requirement for FTC to apply to be interns. Interns are included in all activities that are under Tech Ninja Team control. Due to FIRST policies, interns cannot participate as a team member in competition activities such as operating the robot during matches or in judging. Intern applicants should contact one of the mentors for more information.

Member Obligations

One of The Tech Ninja Team's goals is to be a nationally competitive FIRST Tech Challenge Team. To reach that goal, every team member is expected to be familiar with the robot's design

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PROGRAMMING AND CONTROLS¶
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and development, be familiar with the outreach activities that the team performs, and be able to demonstrate this knowledge to the judges at qualifying tournaments. As a team, we believe the only way to meet these expectations is to actively participate in every dimension of the FIRST Tech Challenge program. The team has specific participation requirements.

Team Fees

Due to the costs of robot materials, tournament registration and other associated fees, each team member is expected to contribute $100 annually for team dues. In addition, team members may be required to purchase a team uniform if they do not have one or have outgrown their existing one. Please contact Cameron Nelson if you are unable financially to meet this requirement.

Priority to Academics

Your academic life at school is higher priority than FTC. The team realizes that team members will at times have homework or other academic requirements that make it hard to meet these requirements. However, the team does expect that team members will communicate when they cannot meet the following requirements due to their academic workload.

Time Requirements at a Glance

Requirement	When	Time Commitment
Team Meetings	Sept-Feb, Twice Weekly	2-3 hours per meeting
Engineering Notebook/Portfolio	Sept-Feb, writing 20-25 pages	5-10 hours over the season
Outreach Activities	8-10 Throughout the Year	Attend at least 4
Drive Team Practice	Sept-Feb, at Least Weekly	1-2 hours per meeting, drive teams only
League Meets	Nov, Dec, Jan	7A-2P
League Qualifier	Early Feb	7A-6P
State Championship	Mid-Late Feb	Fri Evening, 7A-7P Saturday
Service to the Shop	Year-round	5 hours/year
Off-Season Meetings	Mar – Sep, Weekly/Bi-weekly	2-3 hours per meeting

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MEETINGS

Whole-team meetings will happen twice a week during the competition season. These meetings usually happen on a Friday evening and a weekend late afternoon and are 2-3 hours each. Sub-teams may meet at other times during the week and mentors often hold "office hours" at the Science Center on weekday afternoons and evenings for team members that want to work on the robot. It is required that team members make their best efforts to attend whole-team meetings and any other meetings that their sub-teams may decide to hold. Team members should let the team know via e-mail or slack if they are attending or not attending a meeting so that the team may plan accordingly.

ENGINEERING NOTEBOOK

Our team keeps an engineering notebook because presenting a high-quality notebook is a requirement for *all* judged awards during qualifying and championship tournaments. To be competitive during the judging process, we target having engineering notebook content of approximately 250-300 pages. **As a team member you will be required to write approximately 20-25 pages of the engineering notebook during the season**.

Each meeting, someone from the group that you work with will be responsible for documenting that work before the next practice - how decisions were made, what work was done, what was learned while doing that work, and what work remains.

Before anyone in that group can work on the robot again, the engineering notebook entry for the current work must be completed.

The team will track and make visible how the workload for maintaining the engineering notebook is being distributed, and mentors will help ensure that the workload is spread evenly.

OUTREACH

One component of the FIRST vision is for teams to provide outreach to their communities – getting students and adults excited about the world of STEM and to spread awareness of FIRST and their efforts. The team participates in stand-alone outreach events, such as our season kick-off, information and fundraising at festivals and markets, attendance in parades, robot demonstrations in local schools, etc. We also are asked to participate in activities planned and hosted by the Homewood Science Center. **Team members are required to participate in at least 4 outreach events per year** – they are requirements for many awards in FTC and they are good practice for the judging portions of the FTC tournaments.

DRIVE TEAM

To be considered for placement on a drive team as a driver, operator or coach, you must be:
1. Current on outreach requirements
2. Be an active contributor to the mechanical and/or software systems on the robot
3. Be current on engineering notebook requirements
4. Pass a written test on the current season's challenge rules with a 100% score

5. Commit to being available for competitions, and if unable to attend, giving notice at least one week in advance
6. Attend structured drive team practice outside of normal meeting times

MANDATORY EVENTS

During the year, all team members are required to attend the following events:

- FTC Season Kick-Off in early September

- League meets – one each in November, December and January

- Qualifiers – in January or early February

- If the team qualifies – State Championship Tournament in February

The team may determine there are other mandatory events or meetings during the year. Team members should plan on extra, mandatory preparation and practice time for the League Qualifier, and if the team progresses, the State Championship. If unable to attend one of these mandatory events, team members should speak with a mentor at least a week in advance.

SERVICE TO THE SHOP

Team members are required to spend at least 5 hours/year performing tasks designated by the Workshop/Pits Director or the mentors to keep the team workshop clean and organized.

WORKSHOPS

From time to time mentors or veteran team members may host workshops to teach skills related to FTC to the team and/or other local FTC teams. We encourage attendance by other Tech Ninjas to both expand their knowledge and to support those that are providing the workshops.

OFF-SEASON MEETINGS

In addition to presenting workshops, the team meets throughout the year to plan for outreach events, socialize, clean and organize the workshop, and work on projects to prepare for the upcoming competition season. Team members are highly encouraged to attend these meetings, missing out on these meetings puts team members further behind when the competition season arrives.

REQUIREMENTS TO ATTEND COMPETITIONS

While all team members are welcome to attend competitions like league meets, qualifiers and the state championship, if team members are spectators during our regular meetings and are not meeting the requirements listed above, they can expect to be a spectator at those events.

Communication

Slack

The team uses the web application Slack to communicate when we are not meeting together. *Slack is our primary communication platform for team members. It is essential that all team members check it regularly.* All team members are required to create an account on Slack at http://hf-robotics.slack.com when they join the team. If team members have a smart phone, they should install the Slack app on their phone and turn on notifications in order to make communications more timely. Parents of team members may create accounts on Slack as well. All conversations are archived on Slack and the general team behavior expectations apply in conversations held there.

Email List

Information that is of general team interest – generally meeting dates/times, tournament information etc. is also sent to the e-mail list ftc-team9929@hfrobots.com. *Each team member must have a personal email address and a parent email address on this list.* Parents, and team members (if they have an e-mail address) will all be subscribed to this e-mail list when they join the team.

Team Calendar

The team calendar is hosted on Google Calendar and can be accessed directly at http://bit.ly/2sEP3Hg or if you use Google Calendar can be subscribed to with the identity "hfrobots.com_pfjhnkshtp2tc21lh73e53iv98@group.calendar.google.com".

Google Calendar also links to Slack and automatically posts updates there.

Online Resources

FTC Forum
The FTC Forum (https://ftcforum.usfirst.org/) is the official forum for discussions, rule changes, clarifications, and questions relating to the FTC game. Students should register an account and check the forum regularly.

Reddit
Reddit is a good resource for FTC discussion and strategy, which can be found at r/FTC. We encourage students to subscribe to and review the FTC thread on Reddit, and to install the Reddit app on their smartphones. *However, Parents should discuss appropriate internet use with their children, because there are other threads on Reddit that are highly inappropriate for students, as well as threads that are highly inappropriate at any age.* Students caught perusing these *other* threads may have their phones confiscated, may be asked to leave practice, and will likely be required to have a discussion with their parents and team mentors.

YouTube
YouTube is also a good resource for FTC discussion and strategy. Team members can locate robot build ideas and strategies by reviewing prior years' robots and challenges. Merely searching YouTube for "FTC" will yield a wealth of information.

Facebook, Twitter, Instagram
Many FTC teams maintain Facebook, Twitter, and/or Instagram accounts. These teams will often use these accounts to post ideas on builds, mechanism, and strategies. To the extent students are permitted to use social media accounts, they are encouraged to follow / subscribe to other FTC teams.

DEVICES
Neither a smartphone nor a computer are *required* to participate. However, properly used, both can improve the FTC experience.

Smart Phones
Because we rely heavily on Slack for team communications, having a smart phone with the Slack app installed will make it much easier to keep up with team practices, strategies, assignments and discussions. Smart phones are also very helpful in documenting progress on the robot; we *frequently* use these devices to photograph the robot, or notes on the whiteboards, and post those images to our Slack channels. Smart phones are also helpful for quickly looking up crucial information.

However, these devices can also be a distraction during team meetings. Text messaging friends, playing games, and viewing content not related to robotics is disrespectful towards fellow team members as well as mentors. We are teaching team members how to function in a real-world environment – and that includes knowing when it is a bad idea to check your phone. The team mentors much prefer that team members learn to use their phones responsibly, but reserve the right to confiscate phones during practices if they become a problem.

Computers
Access to a computer is not mandatory for participating in FTC, but we have found it may improve the experience for certain students. Team members who have access to a laptop are encouraged to bring it to practice. It will not get used every practice, but you will regret not having it when you need it.

Team members use computers for four general categories of work:
- General internet research, including researching robot design issues, reviewing game rules, and checking the FTC forums and Reddit threads.
- Word processing, such as editing the team engineering notebook, using Google Docs or Microsoft Word.
- Java Programming using Android Studio.
- Computer-aided design (CAD) using Autodesk Fusion 360.

A cheap, low-end laptop will be adequate for general internet research and word processing. But Android Studio requires a "real" laptop (Mac or PC, not a chromebook), and Fusion 360 requires a "good" laptop. Students who are serious about learning Java or CAD will benefit from having their own machine, *if* those students are likely to continue working on Java or CAD

outside of team meetings. Parents who are considering purchasing a laptop should speak with team mentors first, but from experience we have developed the following guidelines:

- The 13", flash-based "ultrabook" form factor is hands-down the best for students. Larger, less portable laptops are less likely to be used, and more likely to be dropped.
- For Java programming / Android studio, we would recommend something with an i5 processor and 8GB of RAM.
- For Fusion 360, we would recommend something with an i7 processor and 8 GB of RAM.

Facilities

Homewood Science Center

The team is fortunate to have meeting space provided by the Homewood Science Center. They are an active supporter of the Tech Ninja Team and are a valued partner in what we are trying to accomplish with STEM education in the community. The practice space is in the east half of the garage, includes a full practice field, work surfaces, machine tools, desks and whiteboards.

Please remember that at all times the team is a guest at the Science Center and should treat the facility with respect. The Science Center requests that students enter and leave our meeting space through the front door or the garage door if it is open.

Rules and Guidelines for Team Facilities

- No team member is ever to work without a mentor on site.

- Team members must complete safety training and pass a safety test for each power tool each season. This information is tracked in a spreadsheet on our Google Team Drive maintained by the mentors and the team safety officer.

- Always wear safety glasses and other required safety equipment when working with the robot, operating power equipment or when you are near power equipment that is in use. Safety glasses and other personal protective equipment is stored in the "phone jail". When entering the practice space, leave your phone in the phone jail and pick up your safety glasses – return them to the same place when leaving.

- Loose hair and long clothing must be tied back or removed as appropriate before a team member may use any power tools.

- Report any injuries to a mentor immediately.

- If a tool malfunctions or breaks, it must be reported to a mentor immediately.

- When finished with a tool, it must be returned to its proper location. At the end of every meeting, all tools and materials must be put away and the work area returned to a clean and organized state.

- If a team member leaves before a meeting has normally concluded, they must allow time to clean up their work area(s) and they must let a mentor know that they have begun doing so.

- Team members are not allowed to leave the facility without notifying and signing out with a mentor.

- Food and drink is allowed at the discretion of a mentor. Team members must use common sense when given permission to have food or drink to avoid injury or damaging equipment, robots or the facility.

- Members must partake in a robotics-related activity while in the meeting space. If a team member is caught not participating in an appropriate activity they may be asked to leave the practice.

- HF Robotics mentors and Homewood Science Center staff always have the final word when safety is at stake.

Failure to comply with the stated safety rules will lead to disciplinary action and/or dismissal from the facility.

IDENTITY
The Tech Ninja Team is becoming well-known locally in the Homewood/Flossmoor area as well as within the Illinois FIRST community. TNT is associated with a very recognizable, distinct visual identity.

IDENTITY STANDARDS
The Tech Ninja Team brand, when used frequently and consistently produces a positive, powerful and lasting impression. Because of the value of this impression, the team has standards for dress, typography, color scheme and graphic design that are required to be followed.

DRESS CODE
The dress code must be maintained at all FTC competitions, all off-season events and robot demonstrations. At FTC competitions, team members must wear the complete team uniform. For safety, closed-toed shoes must be worn. This requirement is non-negotiable.

At off-season events and robot demonstrations team members may wear either the competition uniforms or other team spirit wear. Team members at the event should dress uniformly, so the team should coordinate what they are wearing before the event.

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Design and Typography Standards

To maintain our strong team brand, the team has developed design and typography standards that are listed in the document "Tech Ninja Team Design Standards". These standards must be followed for all team-produced publications and marketing materials.

Photography and Media

All Tech Ninja Team members must be willing to be photographed and appear in team-related publications and media.

Travel and Competitions

Traveling to competitions and putting our robot and team through their paces is the culmination of everyone's hard work and dedication. Because FTC teams are small and there are so many roles to fill at tournaments the team really depends on your attendance at tournaments.

Most competitions start somewhat early on weekend days. League meets happen within relatively short distances from the Homewood/Flossmoor area, as close as Marian High School in Chicago Heights, and as far as Kankakee. League meets usually last half a day. Qualifiers, State and Super Regionals and Worlds may happen some distance away – and happen over a full day or more and require overnight stays.

For local league meets, team members are expected to arrange their own transportation and arrive at or before the agreed upon time. There is enough work to go around to get unpacked and setup in our pit area, get the robot inspected and prepare for competition.

The team will decide on transportation for other tournaments. League qualifiers may be held close by (hosted by us!), or as far away as Batavia. The State Tournament is usually held in Elgin and takes place over a Friday evening and a full day on Saturday. World Championships are multi-day and may be as distant as Michigan or Texas.

Depending on the distance we may travel together, or require team members to arrange their own transportation. Again, being on-time is important. In addition to everything that happens at a league meet, the team must have time to prepare for judging – which usually starts before the robot competition begins.

Team members shall keep their adult mentors informed of their specific activities and whereabouts at all times. Team members may not use their own cars or ride in cars belonging to other team members to, from, or during the competition. Team members may not leave the competition early, without the consent of their parents or guardians, and acknowledgement from an adult mentor. The buddy system will be strictly enforced. Team members must always be with their partner. Team members must not be alone at any time.

COVID-19 Policy for 2022/2023

We will treat working in the workshop the same as participating in an indoor sporting event and follow the guidance of the Illinois Department of Health for indoor sports.

Working in the workshop will work like this:

- If you're sick (in any way), please stay home
- All participants must sanitize hands
- Participants must comply with Illinois Department of Health community transmission level guidance
- Workspaces/areas/capacity arranged to facilitate social distancing
- Plan work to minimize shared area contamination (toolbox, parts bins, etc).

We will adjust these procedures as the situation with COVID-19 changes and will contact every team member by e-mail when we do.

Authority of the Handbook

The policies set forth in this handbook are binding and must be followed by all team members. There may be addendums to this handbook such as the Identity Standards and Drive Team policies, and these documents are binding as well. The mentors may change the handbook at any time. Team members and parents will be notified of any modifications. All team members must acknowledge the authority of the handbook by accepting and signing the form on the following page.

Team Member Contract

By signing below, I acknowledge the following points:

- I have read the Tech Ninja Team handbook, and understand and agree to comply with the policies within.

- I understand that the equipment used to construct robots can cause serious injury if used incorrectly. I understand that team members are not to use any piece of equipment until they have been instructed on its safe and proper use and that team members are not allowed to use any power equipment without mentor supervision.

- I understand that participation requires attendance at mandatory events, and I will comply with the schedule of those mandatory events.

- I understand that I agree and consent to allow my photograph and likeness to appear in media related to The Tech Ninja Team.

- I understand that violation of any of the above policies above is punishable up to and including dismissal from The Tech Ninja Team.

_____

Student Name

_____

Student E-mail Address

_____

Date

_____

Parent Name

_____

Parent E-mail Address

_____

Date