FRC Team 1732
Hilltopper Robotics

Team Handbook 2024-2025

"The hardest fun you'll ever have!"

Revised AUG 2024

About Team Handbook This handbook is intended to contain the information needed for all 1732 team members to understand the administrative and logistical procedures for FRC Team 1732 Hilltopper Robotics. It is updated yearly by Cortex to accurately represent current standards.

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Section 1: Introduction

1.1: What is FIRST?

*FIRST (***F**or **I**nspiration and **R**ecognition of **S**cience and **T**echnology) was founded in 1989 to inspire young people's interest and participation in science and technology. Based in Manchester, NH, the 501(c)3 not-for-profit public charity designs accessible, innovative programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

Almost four thousand teams worldwide compose the FIRST Robotics Competition (FRC). An annual FRC game is released that combines the excitement of sport with the rigors of science and technology, producing the ultimate Sport for the Mind. Under strict rules, limited resources, and an intense six-week time limit, teams of students are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program industrial-size robots to play a difficult field game against like-minded competitors. It's as close to real-world engineering as a student can get. Volunteer professional mentors lend their time and talents to guide each team.

"Gracious Professionalism" and "Coopertition" are part of the ethos of FIRST. They are ways of doing things that encourage high-quality work, emphasize the value of others, and respect individuals and the community. With Gracious Professionalism and Coopertition, fierce competition and mutual gain are not separate notions. Students learn and compete like crazy, but treat one another with respect and kindness in the process. Teams help and cooperate even as they compete.

1.2: About Hilltopper Robotics

Team 1732 Hilltopper Robotics is a FIRST Robotics Competition (FRC) team composed of students, parents, volunteers, mentors, and moderators from both Marquette University High School (MUHS) and Divine Savior Holy Angels High School (DSHA).

1.2.1: Mission Statement

The mission of Team 1732 is to:

- provide growth through meaningful, educational, life-changing experiences as students learn new hard and soft skills through robotics team activities
- act as a vehicle for modeling the mission and core values of DSHA, MUHS, and FIRST
- achieve excellence (individually and collectively) in competition
- Build a Stairway to STEM

1.2.2: Team History

Working out of a small closet at MUHS, Hilltopper Robotics was founded in the Fall of 2005 and focused on design and build strategies for FRC and VEX robotics. In 2008, the team extended its reach further to include both MUHS and DSHA students. Today MUHS and DSHA students collaborate in the O'Rourke Robotics Center at MUHS. Notable events and accomplishments include:

2005 Winner, Milwaukee VEX Competition
2006 1732 began competing in the FIRST Robotics Competition
2007 Curie Division Finalist, FIRST Championship
2008 1732 began collaborating with DSHA
Woodie Flowers Finalist Award, Wisconsin Regional: John Wanninger
2010 Winner, Wisconsin Regional
Winner, Midwest Regional
Woodie Flowers Finalist Award, Midwest Regional: Scott Keller
FIRST Dean's List Finalist Award, Midwest Regional: Justin Chan
2011 FIRST Dean's List Finalist Award, Midwest Regional: Will Pierson
2012 Regional Chairman's Award, Boilermaker Regional
FIRST Dean's List Finalist Award, Boilermaker Regional: Katie Bitter
2013 Winner, Wisconsin Regional
Engineering Inspiration Award, Wisconsin Regional
2014 Regional Chairman's Award, Midwest Regional
Regional Finalist, Midwest Regional
Winner, Wisconsin Regional
2016 Team 1732 moved into the new O'Rourke Robotics Center at MUHS
2017 Winner, St. Louis Regional
Winner, Wisconsin Regional
2019 Judge's Award, Northern Lights Regional
Autonomous Award, Iowa Regional
2020 Finalist, Midwest Regional
(qualified for FIRST Championship canceled due to COVID-19)
2021 FIRST Dean's List Finalist Award, Wisconsin Regional: Isabella Schweitzer
2022 Winner, Lake Superior Regional
FIRST Dean's List Finalist Award, Wisconsin Regional: Miles Menos
Regional Finalist, Wisconsin Regional
Regional Finalist, Midwest Regional
3x Regional Excellence in Engineering Award Winner
2023 Winner, Miami Valley Regional
Winner, Wisconsin Regional
Woodie Flowers Finalist Award, Miami Valley Regional: Sandra Mejia
Innovation in Control Award, Miami Valley Regional
2024 Winner, Lake Superior Regional
Winner, Wisconsin Regional
Excellence in Engineering Award Winner Lake Superior Regional
Autonomous Award Wisconsin Regional
Creativity Award St. Louis Regional

Team 1732 has also had major success in off-season competitions, MROC Winner 2024, LaserLights 2024, WVROX (26hr 14 min Extreme Endurance Event) in 2022, MARC (Michigan Advanced Robotics Competition) in 2007, 2011, 2013, and 2017. Team 1732 has also been invited to the most prestigious

offseason tournament, the IRI (Indiana Robotics Invitational) on 12 occasions - from 2006 to 2024.

1.2.3: What We Do

Team 1732 members participate in the FIRST Robotics Competition (FRC). Working side by side mentors and students design and build advanced robots for regional competitions. After the game is revealed, teams design their robot using computer-aided design programs and build with metalworking equipment. Throughout an intensive build season that spans 6-8 weeks, the team builds 1-2 robots for use at our regional competitions.

Team 1732 typically attends two or three regional competitions and the FIRST Championship, pending qualification. One regional is usually held in Milwaukee, the others within a 6 to 8-hour drive from Milwaukee, the FIRST Championship is currently being held in Houston, TX.

After the robotics season is over, Team 1732 continues to compete in various offseason tournaments during the Summer and Fall, often including MROC (Mukwonago Robotics Offseason Competition), IRI (Indiana Robotics Invitational), and WVROX.

Team 1732 runs a robust community outreach program. Our mission statement **Stairway to STEM** guides us to provide access to the youth in our community to learn about STEM and have fun. Starting with Books and Bots (4-8yo), Hosting 2 FIRST Lego League (FLL) tournaments, doing Robot Demos at schools/community events, and teaching Robotics Summer Camps at both MUHS and DSHA.

1.2.4: Why Participate in FIRST Robotics

Team 1732 is always looking for new students in all grade levels. The team fosters technical skill development in the areas of mechanical design, manufacturing, electrical engineering, programming, marketing, and business management. In addition to technical skills, the team fosters “soft” skills such as planning, presenting, critical thinking, time management, teamwork, and leadership. Our year-round activities integrate training into our projects, allowing all students to learn the skills required to become valuable members of the team.

Students who join FIRST robotics programs gain access to over $50 million in college scholarships made available by colleges, universities, and corporations that support FIRST. This is exclusive financial help open only to FIRST team members, giving them a competitive edge over other students seeking funds to support their post-secondary education. About 35% of scholarships can be used for any course of study, not just engineering. Awards range from one-time awards to full four-year tuition.

Section 2: Team Structure and Procedures

2.1: Student Application Process

Being a member of Team 1732 is a privilege, not a right. Each year students are required to apply to be a part of Team 1732. Applications will be judged based on past performance, student availability, student interest, and team needs. Team spots are earned and maintained through dedication and active contributions to the team. For the 2024-25 season, students will be evaluated based on performance and interest during the fall term as well as meeting certain expectations including:

- Attending Info Meeting with parent/guardian Sept 11 DSHA or Sept 17 MUHS 7:00-8:00 pm
- Complete the Permission Form (which includes Slack Usage Agreement/Waiver)
- Attend Subteam Fair 9/19***Not required for Veterans or Freshmen that attended 7/19 incoming Freshman day
- Attend at least 4 training Sessions (all are held Tues or Thurs 6:30-8:00 at MUHS)
    - 2 for each Subteam (101 & 102) that they would like to join
    - Strategy 102
    - BOT 101 (Business Outreach Team)
- Commit to Volunteer one full day at the FLL Tournament at MUHS on November 23/24
    - Ask a parent to sign up for a half-day shift
- Complete the Team 1732 online application
    - including info for at least one possible team sponsor
- Register with FIRST (www.firstinspires.org) including parent consent
- Participate in other activities supporting the team to show your interest

2.2: Leadership Structure

While it has changed over the years, the current leadership structure consists of student leads for all subteams, with those leads and key adult mentors serving on the Cortex Committee. Subteam leads are responsible for organizing and running subteam meetings, and some may have specific roles within their subteam, like focusing on a specific skill set or subsystem. The Cortex Committee helps to make executive decisions, like planning, scheduling, and running team meetings and events, as well as working on short-term problem-solving and long-term team improvement.

MUHS appoints a Director of Robotics, Assistant Director, and key Technical Mentors who are the adult members of Cortex. The Director coordinates the Cortex Committee and acts as a liaison to schools along with the Robotics Moderators from DSHA and MUHS.

2.3: Subteams

Team 1732 has 4 technical subteams (Design, Electrical, Mechanical, and Programming) and 2 non-technical (Business Outreach(BOT) and Strategy). Most students will have a subteam assignment for a technical subteam.

2.3.1: Design

The Design subteam uses Autodesk Inventor and OnShape to model the robot in 3D, create a detailed

design, and produce drawings used by the Mechanical subteam for part fabrication. This subteam also helps design prototypes and iterate on parts of the robot that are already built. Design also creates the files for our various computer-aided manufacturing processes.

2.3.2: Electrical

The Electrical subteam designs the robot's electrical system with the Design subteam, and then connects and manages the power, control, pneumatics, and communications systems on the robots, including battery power distribution and motor controls. It works with both the Programming and Mechanical subteams to figure out communication systems and fabricate parts related to the electronics.

2.3.3: Mechanical

The Mechanical subteam is responsible for all the mechanical components of the robot. It prototypes potential robot designs, uses CAD drawings to fabricate parts for the drivetrain and robot mechanisms, and repairs the robot. It works with power tools to complete these tasks and document robot progress. It also constructs the wooden field elements required for the current season's FRC game, builds the robot's bumpers, develops the pit layout, and builds robot/pit supplements.

2.3.4: Programming

The programming subteam writes the code that controls the robot. The code is written in Java and shared via Github. Sensors such as encoders, cameras, and gyroscopes provide automatic feedback to the robot, especially during the autonomous part of the match.
Members of the programming subteam must have some experience with Java (or be willing to take a self-guided course) and will be taught how to use Github. Members will spend their time writing and testing the code for the robot.

2.3.5 Business Outreach Team (BOT)

BOT is the "all-team subteam" since everyone is on it. Leads coordinate all marketing, communication, and Outreach efforts.

Outreach mission: Stairway to STEM. We will reach into our community to build STEM access appropriate to many age levels emphasizing fun and encouraging STEM education. Starting with Books&Bots (4-8 yo), Robots Demos (grade school), FLL Tournaments (middle school), Lego Summer Camps (middle school), Intro to FRC day (8th Grade), Team 1732 (HS), and encouraging STEM degrees into STEM Careers. All team members are involved in these activities each year.

Marketing advances our team identity and builds enthusiasm within Hilltopper Robotics and into the community beyond. It promotes team spirit by coordinating our communications through our website and social media (including photography and videography) as well as helping us build a successful robot and make it to tournaments through an annual fund-raising campaign. They lead the submission efforts for the Regional FIRST Impact Award, Woodie Flowers Award, and other FIRST awards. This subteam is also responsible for team logos, spirit-wear clothing design, and team spirit during our tournaments.

2.3.6: Strategy

The Strategy subteam typically meets once per week during the build season to analyze the game, understand the rules, and develop a scouting system. Before each competition, members review match footage and collect data on attending teams. They aid in pre-match strategy and playoff alliance selection. This subteam also organizes the groups of scouts at competitions (See 2.5.1).

2.4: Other Team Roles

2.4.1: Scouting

This group is typically composed of Strategy subteam members along with any other interested students. Scouting takes place at competition events and includes pre-competition research of attending teams. During competition events, this group is responsible for collecting and organizing robot and match data. Most members of the team are expected to help with scouting at events.

2.4.2: Drive Team

The Drive Team is responsible for robot operation at competitions and is made up of four student positions and one Mentor as outlined below:

- Driver: Drives the robot on the game field; controls a few other functions
- Operator: Controls robot manipulators and other functions while assisting in match strategy
- Human Player: Interacts with game elements to assist robots
- Technician: Helps carry the robot and drivers to the field and prepare for the match
- Drive Coach: Typically, a mentor who directs the drive team through a continuously evolving, adaptive strategy while monitoring the time, score, and other robots.

Students are selected to be part of the Drive team by the mentors based on participation, experience, skill, and ability to carry out required responsibilities. There will be tryouts for drivers before the first competition to allow time for practice.

2.4.3: Project Managers

Project Manager may be designated for special projects or tasks at the discretion of mentors and leads as the need arises. These positions are used both to designate authority amongst senior team members and as a stepping stone to teach new members to take on leadership roles. A few examples:

- CNC PM
- Training PM
- Summer Camp PM
- Safety Captain PM

2.5: Seasons of the Year

2.5.1: Fall Training

Veteran team members continue to meet occasionally after the final off-season competition to fix the

robot (as it will be needed for outreach events in the Fall including Open Houses) and complete other tasks. After school starts and Information Meetings, subteam fairs, and training sessions take place students submit applications to the team and will be selected to join the team and placed onto various subteams. After the team is formed in November, build meetings begin giving new students (rookies) and veterans alike the chance to learn more about our tools and processes. During this time, there are many community activities and events, sponsorships are sought, and our FLL tournament takes place. In addition, a Mock Kick-Off event will take place which closely imitates the FIRST FRC kickoff in January.

2.5.2: Build Season

The Build Season begins the first Saturday of January (when the new FRC game is announced) and runs until the first tournament. During this time, Team 1732 learns the rules; prototypes and iterates various mechanisms; designs the robot; and builds the competition and prototype robots. Due to the short build season, student attendance and effort during this time are paramount to a successful season.

It is important to note that while everyone's ideas are encouraged and considered, all final decisions regarding robot design are made by the lead technical mentors. While they are encouraged to reach a consensus with all students and mentors, this is not always possible.

2.5.3: Competition Season

This season runs from our first tournament until the end of our scheduled regional tournaments, or hopefully through the World Championships. During this time, work on the robots continues along with preparing for and traveling to various FRC tournaments.

2.5.4: Off-Season

The off-season begins after the World Championship (April) and runs through summer vacation until the start of the following school year. There are typically several off-season tournaments we attend with our previous season robot. This is the ideal time for younger members of the team to try out new roles and responsibilities in preparation for the seniors leaving for college.

2.6: Mentors

Mentors are adult volunteers who donate a great deal of their time and effort to help students on Team 1732. Mentors help with team organization, provide technical support, and support students in all aspects of running an effective team. Being a FIRST mentor requires dedication and a significant time commitment. Our team mentors work extensively with team members during the build and competition seasons, designing, building, and fabricating a functional robot for competition as well as preparing for our tournaments. Their experience is the catalyst for the team's and students' success.

Mentors engage and inspire students in ways far beyond science and technology. They enable both students and adults to appreciate the value of sportsmanship, teamwork, and Gracious Professionalism.

The following are the expectations of all Team 1732 mentors:

- Be over the age of 18
- Have a High School Degree and be at least 1 year out of High School
- Prioritize the safety and well-being of the students above all else
- Follow the MUHS and DSHA Codes of Conduct
- Follow the *FIRST Youth Protection Program* (FYPP) Code of Conduct
- Complete an annual background check
- Complete the MUHS Driver Registration once every 3 years to be able to transport students
- Complete the Archdiocese of Milwaukee's *Safeguarding All of God's Family* training every 5 years
- Maintain a professional relationship with students by limiting contact on social media until after they have graduated.

2.7: Team Decision-Making

Team decisions are made and enforced by the Cortex Committee, a group of mentors and student subteam leads responsible for the general direction of the team.

- Decisions will be made by consensus whenever possible, with consideration given to all reasonable arguments presented in person at a meeting or submitted properly. Naturally, those with more experience, who are most connected/impacted by the issue under consideration will have greater influence in the decision-making process.
- For general Team decisions, Robotics Director will have the final say when a consensus cannot be reached, always when the decision is bound by school policy.
- For technical/competition-related decisions (robot design/build/repair/modify, field elements, tournament prep) if a consensus cannot be obtained, the Key Technical Mentors will make the final decision.

Students, parents, and mentors should understand that while this is a learning environment, this is a competitive team, and not every idea, design, or thought by a student, mentor, or parent may be acted upon and come to fruition. Team leadership will listen and respect all ideas presented, but not all will be put into practice.

Based on time, funding, and other resource constraints, as well as the dynamics of the challenge, some decisions may have to be made by the leads and mentors since the team has limited time to build a robot that successfully plays the game.

At all times, the Robotics Director and Key Technical Mentors are responsible for ensuring that all decisions (including, but not limited to: robot design, student participation levels, and workgroup makeup) are made in the best interest of the majority of students and the team.

Section 3: Member and Team Expectations

3.1: Have Fun!

This is a competitive team, but that does not mean we do not know how to have fun! If team members follow the rules of the team, the rules of MUHS and DSHA respectively, and demonstrate the values of Gracious Professionalism, there will be no problems. After all, everyone is here to experience science, technology, and teamwork in a positive and fun environment.

3.2: Communication

The Team has made a significant investment in a subscription to an internal team communication system called Slack. All team members are required to maintain an active Slack account on: https://team1732.slack.com, through their school email (for students). All students must use a current photo that they may be identified from as their profile picture. **They must check Slack daily,** especially during the build season, which can easily be done by mobile app, desktop app, or through a web browser. Messages will be communicated via Slack and during team meetings. Team announcements, group chats, and private messaging are all available through Slack, so it is a vital tool for team communication. Team members will be subscribed to an all-team announcements channel along with their subteam-specific channels. Team members will also use Slack for communication during team competitions.

Slack usage will be periodically checked by mentors to note inactivity, which can jeopardize chances for travel with the team.

Communication with parents is usually done through email, and parents are expected to check their email periodically to keep up to date on deadlines, permission slips, and other important information. Parents joining the team as a chaperone or a mentor are required to create a Slack account for easy communication with mentors and other team leads. Completing a Slack Usage Agreement is part of the team join requirements.

3.3: Varsity Requirements

Team members have the opportunity to earn a Varsity Letter. Requirements are

- Meet all Join Requirements
- Actively participate in Jan Season Kick-Off Meeting
- Attend and actively contribute to Build meetings Offseason: 2 evenings/week. Build Season: 3 evenings + full Saturday
- No unexcused absences
- Actively participate in all local Tournaments and at least 1 travel tournament
- Significant Contribution to the team* (Including but not limited to Lead, Drive Team, Project Manager)

3.4: Academic and Other Requirements

3.4.1 Academic

Each student must meet their school's minimum academic requirement to participate on the robotics team. A student's academic well-being takes precedence over their participation on the robotics team. If a student feels that their school performance is being too negatively affected by their participation on the robotics team, they are expected to bring this to the attention of the mentor in charge of their subteam, or the Robotics Director.

3.4.2 Behavioral

Other behavioral requirements for participation in extracurricular activities such as Robotics also exist per school policies. Essentially, if a student is placed on academic or other probation, this will also prevent them from participating in robotics activities until the issues with their school are resolved. Here are links to the school policies that team members should be familiar with:

MUHS: https://www.muhs.edu/student-life/student-handbook

DSHA:

https://dsha.myschoolapp.com/ftpimages/1051/download/download_7839276.pdf?bblinkid=262531226&bbemailid=41717409&bbejrid=-1871988773

3.4.3 Dress Code

In keeping with the Dress Code policies of our schools and in the spirit of inclusion which Team 1732 and FIRST promote, clothing items, containing business or product advertisements (other than Team 1732 sponsor shirts) or political messaging of any type may not be worn at any Team 1732 activity.

3.5: Participation

Team members should plan on participating in all group activities, barring extenuating circumstances. Competitions, volunteering, and fundraising are all essential to becoming deeply involved with the team and learning and sharing in the team's mission.

3.5.1: Attendance

Students must maintain good standing with the team to attend competitions, off-season events, and other activities. Good standing is determined by participation, attendance, and having a positive attitude. Attendance expectations vary by time of year (Fall Training, Build Season, Competition, and Off Season) and regular team Vs varsity requirements. Attendance will be tracked and used as a determining factor for a student's ability to travel with the team as well as impact the opportunity to join the team next season. Excused absences that are communicated via Slack to the Robotics Director and team leads will not count against team standing.

Build season meetings typically take place from 6:30 - 9:00 pm on Monday- Thursday nights, and from

9:00 am - 4:00 pm on Saturdays, with a mandatory team lunch at noon. Team members attend half of Saturday, and should come from 9:00 am - 1:00 pm or 12:00 pm - 4:00 pm. Each student will have an assigned schedule and will scan in to log their attendance. If unable to attend meetings, the robotics director, subteam leads, and subteam mentors must be informed via Slack before the meeting time. The team understands that other obligations may compete for students' time, but mentors must be informed of all other commitments at the start of the school year and build a season to prevent scheduling conflicts.

Build Season -- Meeting Requirements (to be considered to travel)	
All Team Members	Must attend at least 2 weeknight meetings & half-day Saturdays (AM or PM).
Varsity Team Members	Must attend at least 3 weeknight meetings & all day Saturday.

As the final competition robot will not be fully completed by the first competition, work continues after that competition (repairs and improvements based on lessons learned) participation requirements still exist to qualify for further tournament travel. Students should expect to maintain a high level of involvement through the FIRST Championship in late April. However, personal and subteam schedules may be more varied during this time to reflect shifting team priorities during Competition Season. Monitoring Slack to understand the workload of the team is essential.

Students should feel that they have done something meaningful at every meeting. As subteam leads are often busy, it is up to the student to show initiative to get involved and learn things that will open doors to new opportunities.

There will be several mandatory, all-team meetings and events, including fall information meetings and the FRC Kickoff in January.

3.6: Fundraising and Financial Obligations

3.6.1: Student Activity Fee

The Student Activity Fee is determined at the beginning of each school year and will be based in part on the team's success in securing sponsorships and donations as well as team size. The Student Activity Fee is set each year depending on team size, number of tournaments, and other variables. **In 2024-25, the team fee is $350 per student.** Upon approval of the student's application, the student activity fee will be billed to the student via their school.

The Student Activity Fee includes:

- Membership on the FRC team
- Attendance at various team events (community activities events, classes, fundraising events)
- Ability to travel to team competitions with the team (travel expenses are a separate fee)
- Access to team tools and equipment, once trained
- Team t-shirts for the season

3.6.2: Student Uniform Fee

Rookies will be charged a one-time fee ($48) for a team polo shirt to be worn at competitions and team activities during their years on the team.

3.6.3: Travel Costs

Each event's travel costs are priced based on distance and other expenses, such as hotel accommodations (usually four students to a room). The average cost for a two-night event is about $250-300, which includes transportation, hotel, tournament fees, and food (while in competition city). If the team advances to the FIRST Championship, we anticipate the travel fees for that event will be higher due to the length of the competition. Please keep in mind that attending competitions is not mandatory but highly encouraged. Financial Aid to travel may be applied for from each school

3.6.4: Payment Procedures

Fees: Team 1732 will provide MUHS and DSHA a list of students on the robotics team and the fees they are to be billed. Fees will be billed to an individual student through his/her respective school's student account. Fees collected by DSHA through the school's student billing system will be passed along to MUHS and credited to the Robotics team.

Travel Costs: Any team member wanting to travel to a competition must complete a Parental Permission Form and return it to the Tournament Forms Vertical File in the Robotics Build Room by the stated deadline. The Permission Form will provide details about the trip, including dates, locations, travel costs, etc. It will include a statement saying that the non-refundable travel costs will be billed through the student's school billing account. By signing the form, students fully commit to participating in the competition. By providing signature consent, parents are agreeing to pay the travel costs as stated. Travel costs will be billed in the same manner as fees and are **non-refundable** once Parental Permission Forms are signed and turned in. Team mentors will provide each school with a list of travel costs to be billed to each traveling student. DSHA will collect fees from their students and pass them along to MUHS for deposit into the Robotics Team Account. Any outstanding billed fees must be paid before being eligible to travel to a subsequent tournament.

3.6.5: Financial Aid

Some financial aid is available for students to help cover all or part of the Student Activity Fee and/or travel fees. Please contact your respective school contact (Ann Duffy / duffya@dsha.info at DSHA or Adrian Gardner / gardner@muhs.edu at MUHS) for more details about obtaining financial assistance.

3.6.6: Team Funding

Running an FRC team is expensive; our budget is over $150,000. The team is funded by student activity fees, the schools, and multiple sponsors. Students are **required** to assist the team in fundraising. The requirements are that each student will provide the name of at least one local community business with a contact's name and information (address, email, etc.) and write a personalized letter (based upon a provided template) to those businesses. This must be done to qualify for competition travel.

3.7: Travel Eligibility

To be excused from school for offsite team activities, each student is responsible for following the Excused Absence policies of their respective school (refer to student handbook links in Section 3.3 above).

Students who travel with the team are expected to reach the minimum fundraising, community activities, and attendance requirements. If more students want to attend than spaces available (the number of spots varies by tournament), mentors for each subteam will select students who are permitted to miss school or travel with the team based on participation and competition role. Competition roles such as Drive Team, Scouting, and Awards presenters receive priority when deciding which students can attend.

Team members must submit their Parental Permission Forms and any other related travel paperwork by stated due dates or risk the chance of not being able to travel.

3.8: Competitions & Events

3.8.1: Dress Code / Team Uniform

The dress code for competitions and outreach events includes team shirts, safety glasses, and closed-toed shoes. Students who wear inappropriate footwear are not allowed in the venue's pits and must remain in the viewing stands for the duration of the event. All team members are required to wear the appropriate team shirt at competitions. Team shirts may not be modified and should not be covered up when representing the team in the pits, on the field, and during our matches in stands (anytime our robot is on the field/queuing) out of respect for the team's image. If a team member is cold they may layer a long sleeve shirt underneath the uniform. If the team member is still uncomfortable they may wear a team or school jacket over their uniform when our robot is not in a match.

Team members will have three sets of team uniform shirts to wear during the competition. Typically, on Thursdays, team members will wear a team or school shirt. On Fridays, the current season's team sponsors shirts, and on Saturdays, members will wear team polos.

3.8.2: During Competitions & Team Events

At competitions and team events, all students are expected to represent our team, schools, sponsors, and city. Students are expected to give full effort to assigned duties, including Drive Team, Pit Crew, Scouting, and in general helping out as requested. When in the Pits all safety requirements must be followed Safety Glasses, closed-toe shoes, and hair 1" past shoulder tied back or secured.

Students may not use electronic devices for non-robotics activities during competition anytime our robot is on the field/queuing. Personal Wi-Fi hotspots interfere with robots and are thus banned at events. Additional event rules, available in the FIRST manual and via websites for specific events, must also be followed.

During events and when traveling with the team, team members are not permitted to leave the venue/hotel without a mentor and/or chaperone with them. This rule is to help enforce the safety of the team members and for accountability in the case of an emergency. The team understands that there

will be certain situations where this rule cannot be enforced and requires that students ask for permission from a mentor or chaperone before they depart from a venue. Disciplinary actions will be taken against students who leave a venue without explicit permission from a mentor and/or chaperone including, but not limited to, dismissal from the team and/or disciplinary action from their respective school.

During all competitions, when our team has a match, all team members not part of the Drive Team or scheduled in the Pits are required to be in the viewing stands. During our match, team members are expected to support our team and alliance partners by cheering and paying attention. Team cheers and chants must be respectful to other teams and only held at appropriate times. Any team member who needs to be absent from the stands during our match(excluding the drive team/pit schedule) should DM the Lead Chaperone.

During regular season and off-season competitions, all team members are expected to stay for the awards ceremony unless travel requirements prevent this. During the awards ceremony, team members will show Gracious Professionalism to other teams by standing and clapping when other teams are presented with awards.

During regular season and off-season competitions, all team members are expected to help clean up the viewing stands after competitions, as well as help take down the Pit. If the above requests are not completed, mentors have the right to suspend team members from future events.

At regular season and off-season competitions, those who are not members of Team 1732, but are cheering for or representing the team in any way, such as parents and friends, must adhere to these guidelines as well.

3.8.3: At the Hotel / Lodging Location

Often, the team will stay at hotels for overnight events. In these cases, students must adhere to the hotel's policies and regulations. Students are prohibited from using the swimming pool or exercise center without prior approval by mentors. Students are not allowed to leave the hotel without a mentor or chaperone or with their explicit permission. Students who have permission to leave the hotel must be in a group of 3+ or with a mentor.

Students will have a clearly stated curfew and "lights out" times, and are expected to follow these rules. Male and female students will never share a room, and will not enter rooms of any student of the opposite gender or the room of a mentor. This is to prevent inappropriate behavior and protect students from possible accusations of inappropriate behavior.

Students are expected to be respectful to the hotel staff and other members of the public staying at the hotel. Failure to comply will result in the student being sent home from competition. The hotels where the team stays are generous enough to accommodate a team of our size and they reserve the right to remove individuals or the entire team should the need arise. If a situation is deemed serious enough, a hotel may prevent the team from staying in the future. Please help the parents, mentors, and chaperones on trips by being a role model to others and a shining example for both your school and FIRST.

3.9: Acceptable Behavior

3.9.1: Safety

While participating in Team 1732 robotics, your safety and the safety of those around you is the top priority. Most injuries in robotics come from not knowing how to use or misusing a tool. The workshop and all tools should not be used without the permission of a team mentor. No student should use a tool without prior training, even if they've used similar equipment outside of the team.

Students must always wear safety glasses and tie back hair that is 1" past shoulders in the build room, or when working on or near an FRC Robot or using machining tools.

Students should report any injuries that happen at robotics to a team mentor. Depending on the severity of the injury, it may need to be reported to the school for insurance purposes. Do not try to hide or cover up an injury that happened at robotics.

If a student is sick, they should stay home. This is especially true during build season when the team works in close quarters, and spreading sickness across the team could significantly impact our ability to build the robot. Students showing any type of sickness will be asked to go home.

3.9.2: Respect

Students must respectably conduct themselves, consistent with MUHS and DSHA school policies and procedures and FIRST expectations. Team members not only represent MUHS and DSHA but also the team sponsors and FIRST. Therefore, all students, parents, and mentors are expected to behave in a manner that is acceptable and expected of such standards.

Students must be respectful at all meetings. Side group conversations and phone use are not acceptable when a leader or mentor is talking, and such actions risk confiscation for the remainder of the meeting or being asked to leave. Students are encouraged to ask questions after the discussion leader finishes talking.

3.9.3: Integrity

Students are expected to have integrity. Being honest to other team members as well as the team's mentors and not trying to cover up mistakes or errors in judgment reflect team integrity. Team 1732 understands that students make mistakes and while that is okay, students should own up to those mistakes. Being forthright and honest is always best.

3.9.4: Confidentiality

Information about the current year's robot is confidential. Students should not release details (strategy, robot design, pictures, video, etc.) about the current season's robot without the consent of the team's Lead Technical Mentor. This is to build anticipation for the robot's release and maintain a competitive advantage by preventing copying before the end of the build season. Releasing information can include posting to social media, posting to online forums, and emails or texts to friends on or connected with other teams.

3.9.5: Dating policy

Students who choose to date others on the team are expected to leave their relationship "at the door." While at meetings and events, they should conduct themselves as normal students on the team (e.g. no PDA, holding hands, sitting on each other's laps, showing preference, or sneaking off to be alone).

3.9.6: Drug/alcohol/tobacco/vaping policy

Drug/alcohol/tobacco/vaping use is not allowed at any team event. Team 1732 must maintain a safe environment for everyone on the team. Using or being under the influence while at robotics puts yourself and other people in danger. Any student who is caught using or being under the influence at a team event will be dismissed from the team immediately. If the incident happens while traveling, the student will be sent home at the parent's expense, which may require a parent to come pick up the student at the competition location.

3.10: Parental Involvement

Parental involvement is needed as the involvement of parents can greatly improve the experience for their students by helping our team be successful in efforts related to competition and community outreach. It also offers parents a chance to participate in a high school activity with their students and not simply hear about their robotics experience.

Parents must be respectful of the team and its goals, as well as its leads, mentors, and sponsors. Collectively, the team's mentors spend thousands of hours with the team and while parents may not always agree with some of the mentor's decisions, they need to trust that they have the best interests of students and the team in mind. Please bring questions and concerns to the mentors or Robotics Director as soon as they arise.

3.10.1: Parent Volunteering Opportunities

As a part of the student application process, there will be an opportunity for parents to sign up to help in various areas. We need every family to lend a hand and we welcome your support.

There is one requirement for parental involvement. For the past many years, Team 1732 has hosted the largest First Lego League (FLL) tournament in Wisconsin. This is not possible without the volunteer power of many people, including our team's students and parents. Each parent must volunteer a shift on either Friday, Saturday, or Sunday of the tournament.

Here is a partial list of some other parent volunteer opportunities available throughout a typical year:

- Volunteering for a major role for our annual FLL tournament held each November – this is beyond the regular parent volunteer requirement detailed above! Training will be provided. Some examples are: Pit Admin, Judging Room Coordinator, Tournament Judge
- Be an Adult Team Mentor (basically, a consistent volunteer with a defined role). Mentors are needed in our technical and non-technical areas**SG
- Chaperoning an out-of-town tournament trip helping organize meals, bed-checks, etc. **SG
- Saturday Meal Coordinators – Coordinate Saturday meals donated by parents during the build/competition season (January through April) through SignUp.com
- Weekday Meal Coordinators – Coordinate weekday meals with MUHS Dining Service during the build/competition season (January through April) using SignUp.com
- Outreach Adult Leader – Take a small group of students to do a STEM-related activity with grade school children at local libraries/schools **SG
- Helping with small projects on a finite timeline
    - Sew bumpers for the robot
    - Donating part of a Saturday meal
    - Serve as a DSHA carpool driver, transporting girls from DSHA to MUHS after school

- Organizing a lunch “tailgate” at a local tournament
- Help plan the team’s celebration brunch and end-of-season banquet

Sign up as a parent volunteer please reach out to Joan Rider (Roboticsjoan@gmail.com). If you’d like to help with the team’s administrative tasks, please reach out to either Joan or Marianne Stone at team@team1732.com.

**Note some volunteer opportunities are marked with SG. This indicates that the Archdiocese of Milwaukee Safeguarding All of God’s Family training is required. Joan Rider (Roboticsjoan@gmail.com) will coordinate.

3.10.2: Parents and Family Members at Competitions

There is nothing that can explain the excitement of a FIRST FRC competition. Team 1732 encourages family members to attend competitions, both in and out of Milwaukee. Note that Team 1732 will not book travel arrangements for parents unless they are chaperoning.

If parents are planning to travel to a competition, we encourage them to let the team know. In the event the team has extra hotel rooms, bus seats, etc. the team may be able to sell those spaces to parents instead of letting them go unused.

Like student team members, parents and other family members should cheer and support our team and alliance partners. Team cheers and chants must be respectful to other teams and only held at appropriate times. During the awards ceremony, parents should show Gracious Professionalism to other teams by standing and clapping when other teams are presented with awards.

3.11: Self-Motivation

Please remember that as a student, you are your own best advocate. No adult mentor or student leader will make a student do something. Robotics is a self-motivated program. If you want to learn, ask a mentor or subteam leader. If you want to work, pick up a tool or ask a leader. We will make every effort to encourage involvement by all students, but in the end, it is up to you. If you are not sure where you fit in or are not sure of what can be done, please talk to a mentor. There is much to do between meetings as well; ask for assignments and they will be given to you if available and appropriate for your skill level. Self-motivation is what drives the Hilltopper Robotics team!