FRC Team 7166

Team Handbook

Mentors

Melissa Kramer, Head Mentor I, Awards | Electrical

Brad Kramer, Head Mentor II, Fabrication | Design

Reece Kramer, Strategy | Spirit

Roger Moore, Software | Design

John Bachman, Learning Lab | Scouting

April Wright, Outreach | Operations

Tyler Sieben, Design | Fabrication

Vacant, Safety

Ava Brewer, Social Media

Clint Hawks, Videography/Photography

Vacant, Digital Media

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Welcome!

Welcome to Team 7166! This handbook contains key policies and expectations of Red Thunder Robotics (RTR) and its members along with other information you will need.

The success of our team in robotics and its other activities is all thanks to the dedication of our members. Your participation is crucial to fulfilling the goals of Wolfpack Robotics. The commitment and responsibility of every member keep our team running smoothly. We hope that as a member of Team 7166, you will acquire life skills that you will continue to use after high school, in college, and in your career.

About Us

Red Thunder Robotics (RTR) is a mentor-guided ***competitive*** team as defined by FIRST. Business professionals volunteer their time and expertise to provide students with the opportunity to be fully immersed in a STEAM program while acquiring the necessary skills to achieve future goals. Not only do members gain a technical skill set, but they also learn the fundamentals of operations and project management, leadership, team building, marketing, graphic design, finance and more. More importantly, the members of Team 7166 grow socially, intellectually, and academically. Students who participate in RTR have a deeper appreciation of the benefits of STEAM education and *FIRST*'s *Gracious Professionalism* and *Coopertition*, preparing them for life after high school.

Mission Statement

Every action we take is to emulate being "The Closest Thing to Real Life While in High School".

What Makes Us Unique

Unlike what may happen in the traditional classroom, students will learn skills in operations and project management, electronics and wiring, fabrication, public relations, grant writing, public speaking, marketing, programming, two- and three-dimensional design, graphic design, videography, and photography.

Most of the time, members are not given exactly what is needed to learn how to do something or overcome a challenge. Success within RTR requires a drive on behalf of the student to actively search for answers to their questions through Google, YouTube, Chief Delphi, websites, other FRC teams, mentors, and other members of Team 7166.

What is *FIRST* Robotics Competition (FRC)?

The *FIRST* Robotics Competition held its first season in 1992 and now includes more than 3,600 teams across the globe. Student members work with adult mentors to design and build advanced robots which compete head-to-head in 3-on-3 matches. After the annual game challenge is revealed each January, FRC teams have just 6 weeks to design, fabricate, program, test, troubleshoot and prepare their robots. All members can participate in any part of the design or build process.

During pre-season (September – December), students focus on developing necessary skills for the build (January – February) and competition (March – April) seasons. During pre-season, we also compete in off-season events with the prior year's robot.

Team History

We were founded in 2017 in partnership with Laingsburg Community Schools. In the fall of 2021, Wolfpack Robotics expanded with its first FLL team. Wolfpack Robotics now has a K-12 presence with over fifteen FIRST LEGO League Explore teams, five LEGO League Challenge teams, five middle school FTC teams, and the flagship FRC Red Thunder Robotics. Notable accomplishments of our team include:

- **2025**: Team Sustainability Award on Curie field at *FIRST* World Championship
- **2025**: RTR ranks #14 in the state and #126 in the world

- **2025**: Engineering Inspiration Award at Mason District Event
- **2025**: Finalist of Milford District Event, Mason District Event, and Hemlock field of State Championship
- **2025**: RTR advances to the *FIRST* World Championship → 2nd year in a row
- **2024**: RTR earns one of five State (Regional) Impact Awards, advancing to the *FIRST* World Championship for the first time in team history.
- **2024**: 7166 earns the Kettering #1 District Impact Award, advancing to the State Championship for a second year in a row
- **2024**: Recognized with the Gracious Professionalism award at Lansing District Event
- **2023**: 12th place in overall qualification matches and becomes 7th place alliance captain, taking 8th place overall and is recognized with the Team Sustainability Award.
- **2023**: 5th place in overall qualification matches and becomes the 4th place alliance captain, taking 3rd place overall and is recognized with the Imagery Award.
- **2023**: For the first time in team history, team 7166 advances to the *FIRST* in Michigan State Robotics Championship

Team Timeline

Pre-season (Sept. – Dec.) – (Mondays and Wednesdays from 5-8PM)

- Recruit new members
- Training classes and workshops (fabrication, electrical, robot systems, CAD, programming and electronics, systems, photography and videography, Canva, etc.)
- Fundraising and sponsorship acquisition
- Outreach/community service/volunteer opportunities
- Offseason events
- Mentoring our elementary FLL and FTC teams
- Awards (Impact, Safety Animation, Dean's List, Woodie Flowers)

Build season (Jan. – Feb.) – (MANDATORY meetings Mon/Tues/Wed from 4-8PM and Saturdays 9:00-5:00)
Build season is an intense 6-week period starting with Kickoff. The design team will be working to build the 3D model of our robot and create a Bill of Materials for our fabrication team. Video and photography will be gathering footage and creating content. Our social and digital media team will be keeping our followers updated on our progress and writing newsletters to share with our sponsors. Fabrication, design, and electrical teams will be fabricating parts, assembling the robot, and wiring the components and motors. Software will be working on autonomous code, as well as programming the controllers for the necessary functions of the robot.

If there is an extenuating circumstance that prevents you from being present at a build session, you must submit the reason, in writing, to the lead mentors by October 1. **Technical members must be available for every session for these six weeks.**

Build season (January 10 – end of February):

- Kickoff (LHS) – mandatory event – first Saturday in January – all day
- Brainstorming, game strategy, prototyping, deciding robot functions
- Building field elements
- Programming, fabrication, electrical – build the competition robot
- Testing, revising, iterative design process
- Blog posts, weekly videos/media, updating sponsors
- **Competition robot needs to be complete six weeks after Kickoff**

Competition season (March – April) – approximately 10 hours per week of workshop time plus events

- 2 guaranteed District events
    - Each event is two days of competition (could be Fri/Sat or Sat/Sun)
- *Invitation only* - *FIRST* in Michigan (FIM) State Championship, April 16-18, 2026
- *Invitation only* - World Championships, Houston, TX, April 26 – May 2, 2026

"Off"/Post-season (May – Aug.) – (time varies) – students are responsible to participate in at least four (4) outreach events, many of which occur in the offseason

This is what we do in our "off" season:

- Community outreach and engagement
- Parades, fairs, demonstrations
- Outreach/community service/volunteer opportunities
- Fundraising and Sponsorship Renewal/Acquisition
- Write grants and secure business sponsorships
- Apparel and button design for the next season
- Hosting and running Summer Camp
- Leadership Seminar

Joining the Team

Membership is open to all students in the Greater Laingsburg community. Students must be enrolled in an approved secondary educational program. Prospective members must apply to join the team. The deadline for team application is the last Friday in September.

Current members must also reapply each year. Decisions regarding acceptance of returning members are based on the prior year's level of participation, behavior during meetings and builds, and their overall dedication to the team.

Following the announcement of the team roster, new and returning students invited to join the team must complete the Parent and Student Contract, found at the end of this handbook. *Failure to complete this contract will result in a revocation of the student's acceptance*.

Leadership Responsibilities

Students, parents, and mentors understand that this is a learning environment. Because the team is also a competitive team, **not every idea, design, or thought by a student/mentor/parent may be implemented**. The team will listen and respect all ideas presented, but not all will be put into practice.

Based on time and funding constraints, as well as the dynamics of the challenge, some decisions may have to be made by the Student Leadership Team and Mentors to ensure the team can build a robot – in six weeks – that successfully plays the game!

At all times, the Head Mentors and Mentors are responsible for ensuring that all decisions (including but not limited to robot design, district event selection, scheduling, drive team selection, student participation levels, group makeup) **are made in the best interest of the majority of students and the team as a whole.**

FOR THE PARENTS

Communication Avenues

- **Email -** Parents/guardians and students will be added to an email group. Information like team updates, upcoming events, fundraisers, mandatory events, field trips, district competitions, food sign-ups, and more will be sent via email.
- **Remind** – Important schedule changes and announcements will be sent via Remind
  - **To join Remind, text @rtrobos to 81010**
- **Slack** – Parents may also join the team's "Announcements" and "7166 parents" Slack channels at rtr7166.slack.com.

FIRST Registration

Each year, every student must be registered on the *FIRST* dashboard to Team 7166 with a digitally signed *Consent and Release*. Your student may not compete at a FIRST event without the Consent and Release signed.

Our Quick Access Team Registration Link is below, or you may scan the QR code for access
https://my.firstinspires.org/JoinTeam/Welcome/d45b3597-7943-11f0-bfdd-00505699b848

Ways to Help

Mentors cannot provide this unique learning opportunity without the support from its parent base! Parents or Legal Guardians are asked to actively support the efforts of mentors and students. Here are ways parents can help:

- **Food Saturdays during Build** – each family is required to sign up for food at least once during our build season. Similar to athletic "team dinners", Food Saturdays will have a Sign Up with entrée, sides, and dessert/drinks. The families that sign up for the same day get to choose the menu. *Unfortunately, PDPs Pizza in Laingsburg does not open until 4PM on Saturdays.*
- **"Runners" for day-of event needs**
- **Build field elements** – once we learn the game challenge, field elements must be built as quickly so as we prototype, the robot can interact and improve.
- **Be a *FIRST* Volunteer** – teams are required to provide two volunteers to each event. Volunteers need no prior experience and can volunteer for the entire event, or just a portion.

Team Travel

7166 is a competitive traveling team. The team may travel more than one hour to a district event, the *FIRST* in Michigan State Championship, or the *FIRST* World Championship. This section is to provide as much information as possible regarding team travel. Students must meet certain eligibility requirements to travel with the team; please see *Travel and Competition* within the Student Section for more details.

While the team intends to remain at an event through its full duration, it reserves the right to adjust its travel schedule to accommodate the needs and wishes of its students. At all times, the Head Mentors and Team Mentors are responsible for ensuring that all decisions are made in the best interest of the majority of students and the team as a whole.

Students who travel separately from the team or stay offsite from the team will be considered spectators and will not be given a team role for that event.

Student Transportation

Students are expected to travel with the team. Transportation may take the form of school bus, charter bus, self-transport, carpool, or airplane. While in state, the team will travel by school bus whenever possible. For events which take place out of state, the team will travel via charter bus or by other transportation arranged by the head mentors in cooperation with the Booster Club's Travel Coordinator and school administration.

Parents will be notified of the departure time and location in advance. The team's transportation will depart at that predetermined time. It is imperative that your student arrive on time so they are not left behind.

Student Lodging

When our travels require overnight stays, all team members are required to stay with the team in the team accommodations. Rooms will include at least 2 queen beds and students will be arranged four to a room (same biological gender). Lodging may be hotels or Air BnB style homes.

The name and address of the lodging will be communicated to parents with as much advanced notice as possible. Should a parent wish to stay in the same hotel as the team, they are welcome to do so but will need to contact the lodging of choice to make their own reservation.

If parents secure lodging at the team's selected accommodations, their student may be permitted to stay in their parent's room. There will be no reimbursement of collected dues/fees if a student stays in their parent's room. As rooms have penalties for not cancelling within the hotel's deadline, parents must notify the head mentors of intent to house their child no later than 3 days (72 hours) of the start of the event.

Food

Build Season

During build season, students are expected to bring their own food Mondays through Wednesdays. The workshop has a full refrigerator/freezer and a microwave for students' use. Additionally, each student has a locker in the workshop where they can store nonperishables. Parents take turns providing food during our long build "Food Saturdays" (see *Parent Involvement for more information)*. Staples such as PB, jelly, and bread can be donated to the team so students will always have access to food.

District Competitions

Season dues include meals for two district events. Meals include light breakfasts (muffins, cereal bars, etc.), lunch (sandwiches, chips, etc.), and dinner on select nights. Students may choose to bring their own food or money to purchase from concessions. Meals for load in day are the responsibility of the student/parent.

Students who choose to bring their own meals or eat elsewhere will not be reimbursed.

Long Distance Trips

Long distance travel is defined as a trip of 5 hours or more to places such as Escanaba, Lake Superior State University, or *FIRST* World Championship. When a trip leg is defined as "long distance", a meal stop will be included. Meals at these stops will be at the expense of the student. Students are encouraged to bring snacks on long-distance trips.

FIRST in Michigan State Championship

A student's State Champs advancement fee includes meals while at FIM State Championship. Thursday meals include lunch and dinner. Friday meals include breakfast, lunch, and dinner. Saturday meals include breakfast and lunch. Students may choose to bring their own food or money to purchase from concessions. *Students who choose to bring their own meals or eat elsewhere will not be reimbursed.*

FIRST World Championship

A student's World Champs Advancement fee includes meals while at the *FIRST* World Championship. Wednesday meals include lunch and dinner, Thursday and Friday meals include breakfast, lunch (sandwiches, chips, etc.), and dinner. Saturday meals include breakfast and lunch. Students may choose to bring money to purchase food from vendors or food trucks. *Students who choose to bring their own meals or eat elsewhere will not be reimbursed.*

Team Dues and Advancement Fees

Team dues are $150 per member to help offset the costs associated with the robotics program. Two competition uniform tees, district competition meals, lodging for an out-of-area District Event, and robot raw materials are covered with a student's dues. Dues are non-refundable and must be paid by October 7th.

State Championship Advancement Fee: Should the team advance beyond Districts to the *FIRST* in Michigan State Championship, an advancement fee of **$125** will be required from each student. Parents will be notified via email of the team's advancement and payment must be made to the Booster Club within 7 days, unless a payment schedule is arranged between the parent and Booster Club.

World Championship Advancement Fee: If the team advances to the *FIRST* World Championship, an additional advancement fee will be required. The team budgets $1,005 per student ($230 for registration, $375 for charter bus, $175 for hotel share, and $100 for food). Should the team advance to the *FIRST* World Championship, an advancement fee of **$200** will be required from each student. Parents will be notified via email of the team's advancement and payment must be made to the Booster Club within 14 days, unless a payment schedule is arranged between the parent and Booster Club.

Partial or full scholarships are offered on behalf of our Booster Club, if excess funds are available. If your family is unable to financially meet this requirement, please email wolfpackroboticsboosters@gmail.com to request a waiver.

Fundraising

The costs associated with a robotics program such as ours far exceed what is collected from dues and advancement fees. The team must rely on fundraising efforts and acquiring money from grants and financial commitments from businesses to remain sustainable.

Participation in fundraising is mandatory for each family. Participation takes many forms including selling tickets for our tech raffle, assisting at LEGO summer camp, visiting potential sponsors, writing grants, writing thank you letters to donors and more.

Examples of fundraising we do as an entire program:

- Annual Tech Raffle – each member of our K-12 program is expected to sell at least 3 tickets. As a program, we need to sell 500 tickets each year for this fundraiser to be profitable.
- Bingo
- 50 @ $200 – we need at least 50 local business who are willing to donate $200 to our K-12 program to offset material purchases, registration fees, travel costs, and charter bus rentals.

Process of Contact

Parents are asked to follow the process below when needing information:

- 1st level – Head Mentor(s). Parents are asked to bring any questions or concerns to the head mentors so they may appropriately respond.
- 2nd level – School Administration. Should your questions or clarification not be resolved at the primary level, the parent is encouraged to speak with high school administration.

Visitors (Spectators, Parents, and Team Fans) to Our Pit

The pit is an area where teams need to focus on robot maintenance, repair, and strategy. While pits are open to the public, there are limitations to who can enter our pit space and how many can be in its vicinity at once. All individuals affiliated with 7166 must adhere to the following protocol when it comes to our pit space. We appreciate your cooperation.

- **Allow drive team/pit crew/award team/mentors time to work. Visitors are not allowed to our pit for at least 20 minutes following a match**. The drive team and its mentors must complete a series of checklists and debriefs and need time to do so without interruption.
- **8 people at pit, MAX.** No more than 8 people are allowed in/near our pits, including students and mentors. All aisles and pit space must be clear, per FIRST rule E503. The 8-person limit will be strictly enforced.
- **5-minute visit only.** Visitors are limited to a 5-minute stay. Not only do aisles need to be clear per rule E503, but the awards team must have a clear line of sight to judges and judges must be able to easily enter our pit. Additionally, it puts added stress on teams in next door pits if there are too many people. Drive team will be released from the pit to the stands by their drive coach once the appropriate checks have been completed, if there is sufficient time in between matches.
- **Only students and mentors are allowed inside the pit space**. Due to space constraints and safety concerns, visitors are not allowed to enter our pit space.
- **In the event of triage, quick match turn around, and/or a robot emergency, our pits and drive team will be closed to visitors.** We appreciate your understanding and cooperation in this rule. The students and their mentors must be able to work without feeling the anxiety onlookers bring.
- **Please, no entourage.** The only individuals who should be at inspections, meeting with judges, etc. are 7166 students and mentors.

Spectators in the Stands

We love our spectators and the spirit they bring! However, unlike sports teams, *FIRST* Robotics Competition teams are asked to refrain from bringing noisemakers into the venue per rule E108 (no cow bells, whistles, live bands, or air horns). Additionally, *FIRST* has explicitly written a rule (FRC Rule E801) that does not allow for the saving of seats. “Teams are not permitted to save or designate seats for team members that are not present.” In reality, this is done frequently, but please be aware that if another team encroaches on empty space that was “saved for 7166”, they are within the rules of *FIRST* to do so.

Additionally, unlike athletics, our student members are not separated from spectators/fans. In soccer, football, basketball, and even competitive drama, the students are separated from their fans, families, and supporters. In robotics, the students sit near their fans and hear everything that is said during a match. To help keep the stands a safe and inviting place for the team to cheer, watch, or collect scouting data, we ask that spectators refrain from negative comments within earshot of Red Thunder Robotics students.

If negative talk interferes with the team’s ability to do their job, the team may be asked to sit separately from their fans.

FOR THE STUDENTS

Eligibility and Expectations

For students to be eligible to participate and remain on the team; they must:

- Turn in the complete Student Contract by the announced deadline
- Maintain a C+ or better overall and not be failing any classes
- Access to a personal device and Slack messaging
- Comply with the rules outlined in this handbook and by the rules of LHS.
- Actively participate with the team for the duration of the school year.
    - Regularly attend all workshops, meetings and build sessions throughout the entire school year.
- Participate in mandatory team activities, including community service/outreach, FLL mentoring, whole team meetings, production meetings, etc.
- Complete all classroom safety and basic hands-on tool trainings by the announced deadline
- While in the workshop, students should be entirely focused on the task at hand or actively seeking out more work. Students spending time on their devices/phones, playing video games, or who are otherwise distracted may have their build hours canceled, be temporarily suspended or be dismissed from the team.

7166 expects that all students will comply with the standards outlined in this handbook. Members whose behavior falls below these expectations will face disciplinary consequences.

Team members are expected to uphold the standards of *Gracious Professionalism* and the other core values of *FIRST* including Inclusion, Teamwork and Fun. Every member should treat teammates, mentors, members of other teams, and the public with kindness and respect. Please remember that whenever a member is wearing a Team 7166 shirt, they represent the team, our community, and our sponsors.

At competitions, those who are not members of Team 7166, but are actively cheering for the team, must adhere to these guidelines as well.

Team Participation

Academic Eligibility

Red Thunder Robotics is an academic STEM extracurricular. Students must pass all classes to remain in good standing. Grades checks will happen periodically in the preseason and weekly during the build and competition seasons. Students who are taking online classes must be making positive progress toward completing their course in a timely manner.

If a student's grades are not sufficient, the process below will be followed. This process will be in effect and will reset each quarter.

1st insufficient grade check:

1. The student will be counseled by a mentor
2. The student's parent(s) will be notified via email of the situation
3. The student will attend homework lab instead of team practice sessions until grade(s) has improved.

2nd insufficient grade check:

1. The student will meet with two mentors. During the meeting, the student will be notified that a third insufficient grade check will result in suspension from the team.
2. The student's parent(s) will be notified via email of the situation.
3. The student will attend homework lab instead of team practice sessions to improve their grade.

3rd (and beyond) insufficient grade check:

1. The student will be notified that they may not return to meetings, build sessions, outreach events or other community service, nor attend competitions/events until their grades have improved.
2. The student's parent(s) will be notified via phone of the situation.
3. It is the responsibility of the student to present verification of passing grades to their mentors.

If a student is repeatedly showing an F in a class, they will be dismissed from the team for the remainder of the season. They are welcome to reapply the following year.

Attendance

7166 seeks to emulate an authentic business setting and strives to begin the build season with a group of committed team members who are ready to contribute. For these reasons, attendance and active engagement are recorded every session.

Attendance Philosophy

Attendance is more than just being physically present. Our standard is **active participation**—engaging with your department, contributing to tasks, asking questions, helping others, and making progress toward our shared goals. Passive presence does not count toward attendance credit.

Weekly Attendance Expectations

Students are expected to attend **at least 90%, with a minimum of 80%, of scheduled and assigned meetings per week, anywhere between 8 and 20 hours a week.** Attendance will be tracked on a **rolling 30-day cycle**, and eligibility for various roles is based on this ongoing record.

Team Meetings are Mandatory

During build season (January – March), team meetings will be held on **Saturdays at 12:30pm**.

Whole team meetings will be scheduled and posted on our Google Calendar. It is expected that all team members will attend these meetings as important information will be discussed. Other project groups and sub teams will also have meetings as announced. Certain meetings will be declared as "Mandatory" as a prerequisite for attending competitions or other events.

Attendance Rate (Rolling 30 Days)	**Impact**
85% +	**Eligible for Drive Team (these roles are not on a rolling 30-day cycle due to the level of training and commitment)**
85% and above	Eligible for Leadership Team, and SME roles
80-84.9%	Eligible to travel to events, but not for specialized roles
60% – 79.9%	Consultation with mentors and student leaders required; continued participation conditional
Below 60%	Subject to dismissal from the team

Notifications

At least 24 hours before the next meeting, a message will be sent in the attendance channel. For planning purposes, students and mentors must respond to the attendance message with the appropriate emoji by 8:00AM the morning of that session.

Excused Absences (these will not count toward a student's attendance rate)

- Family emergencies (death, hospitalization, etc.)
- Contagious sickness (flu, fever, strep, etc.) – please do not come if you are contagious

Tardy (more than 5 minutes late)

- If you are tardy more than 3 times in a rolling 30-day period, a consultation with the mentors will occur and possible temporary suspension/loss of privilege/loss of travel.

Mental Health Days

The health of our students is always the top priority. RTR supports the use of Mental Health Days to encourage self-care and balance. When needed, students may choose to arrive late, leave early, or not attend at all. There is no required justification for taking a Mental Health Day. Mounting stress, family responsibilities, or the need for rest are all equally valid reasons. *Note – Mental Health Days count toward your rolling attendance rate*.

- When possible, notify your department leader or a mentor in advance.
- If usage becomes excessive, a mentor or student leadership team member will reach out to check in and help you plan a healthy, sustainable path forward.

Meeting Time Expectations

While meetings are typically scheduled to end at 8:00 PM, deadlines and competition demands may require sessions to run later, especially for departments working under time pressure. Students and families are asked to remain flexible and check in with leads during high-priority phases of the season.

Active Participation

The number one factor to determine a student's success, enjoyment, and feeling as part of the team is ACTIVE PARTICIPATION. Just physically being present during meetings, build sessions, and outreach/volunteer events is not enough; students must contribute their ideas and energy to the team. An actively participating student will:

- Enthusiastically complete a task when assigned to one and complete it to the best of their abilities
- Ask another team member or mentor when faced with a problem, to help clear roadblocks
- Provide opinions during discussions or articulate that they do not have one.
- Communicate with the leadership team if the tasks assigned are too much or too little, too easy or too difficult
- Avoid non-productive distractions, such as cell phone usage, watching videos, distracting others or playing games.

If a student is not sufficiently productive or is distracting others during a meeting, a mentor may mark them as "unproductive". Mentors will meet with students who are marked as unproductive to discuss the situation so they understand what behavior caused the marking and how it can be corrected. Unproductive markings will count negatively toward your attendance percentage.

Communication is the key to success. The mentors will work to engage with students who we believe are not actively participating, explicitly referring to this policy. If you have any concerns about your participation, please reach out to the leadership team to initiate a discussion.

Students who consistently exhibit a lack of active participation may be dismissed from the team.

Workshops

Members are encouraged to teach and attend skill building workshops for the team. Mandatory sub team specific workshops may also be held to introduce members to sub team specific skill sets.

Outreach

We participate in many demonstrations and other outreach/service-learning events throughout the year. This is an important way to interact with and raise awareness for STEAM education and *FIRST* robotics throughout the community while also spreading our message and brand. Outreach is important to us and students should make every attempt to attend scheduled outreach events.

20 hours of outreach/volunteering, including volunteering with our younger teams, is required to remain on the team. A schedule will be released each fall for members to sign up for FLL sessions.

Mandatory Events

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

- Mandatory team meetings and training sessions
- At least one offseason event (schedule will be released in September)
- FRC Kickoff
- Robot Reveal Open House (mid-February)
- District Competitions (two – times vary)
- Family STEM Night
- Wolfpack Explore Festival
- Home FTC Meets

The leadership team may announce other mandatory events during the year. Students who cannot attend a mandatory event should speak with a lead mentor at least one week in advance.

Robotics Varsity Letter

To earn a letter (or additional years on your letter), the student must have a minimum GPA of 3.0, 20 hours of outreach, and 150 points from the list below. Points and outreach hours reset every year following the end-of-season ceremony. Letters are only offered to Laingsburg High School students and will be awarded during the end-of-season ceremony each spring.

Students are responsible for keeping track of their point accumulation with a *Varsity Letter Tracker* and will apply for a varsity letter via a Google Form by May 1 of each year.

Points	Description
15	Per in-season competition, including States and Worlds. The member must actively participate. Sleeping or playing on phone does not count.
4	For each 1-day offseason event. The member must actively participate. Sleeping or playing on phone does not count.
8	For each 2-day offseason event. The member must actively participate. Sleeping or playing on phone does not count.
10	For being an active and contributing member of the ***Student Leadership Team***. The student must be present and engaged at least 90% of Leadership Team Meetings.
5	Being a sub team SME (subject matter expert)
5	Serving as an Event Captain
1	Point per hour for ***in-season practice***. A student may not log these as points until they have reached 50 hours of time. These hours will only count if the individual is actively engaged. Simply “being at build” will not guarantee these points.
2	Points per hour for ***out-of-season practice (summer and pre-season)***. A student may not log these as points until they have reached 30 hours of time. These hours will only count if the individual is actively engaged. Simply “being at build” will not guarantee these points.
5	Points per **2 hours of outreach** in excess of the required 20 hours

Team Communication

Communication and Slack

All members are required to have an active, non-school email address. Members are required to join the team's Slack workspace at **rtr7166.slack.com**. Slack is available as both a desktop and a mobile app. It is a vital tool for our team communication as most information will be sent via Slack. **Failure to check Slack is not an excuse to miss required activities or deadlines. Students are responsible for checking Slack and communicating with parents.**

Common channels:

- #20XX team channel – this is where we have our daily conversations relevant to the team
- #announcements – big things go here like possible summer camps for RTR students, changes to the calendar, forms/surveys to complete, and important news.
- #attendance – this channel is for notifying the team if you will be late or absent. *The Student Leadership Team has created a policy that the student must also provide a reason for their absence.*
- #doors – this channel is to notify the team in the event you are locked outside and would like to be let in (red light is on at the main doors)
- #random – this is for birthday shout-outs, random information, etc.
- Each sub team also has their own channel for department specific conversations
- There are several channels you can join, including #memes. Please ask an experienced member for an invitation.

Team Calendar

The team calendar can be found on Wolfpack Robotics' website, www.wolfpack-robotics.com and will be shared with every parent and member email address each fall. Students will be shown how to add the Calendar to their phones. **It is the student's responsibility to know their schedule and be aware of the calendar.**

Photography and Media (Opt-Out Policy)

All members must be willing to be photographed and appear in team-related publications, or a parent/guardian must opt out.

To maintain the team's high standard of integrity, a Head Mentor and the media mentor must approve any documents or media pertaining to the team before its release. This includes the website, blog posts, social media posts, pictures, videos, news articles, award submissions, and publicity materials.

Students may appear in social media posts which include their location. To opt out of your student being involved in press releases or digital media, please email lhsrobotics7166@gmail.com.

Dress Code

Due to safety concerns, Team 7166 follows workshop safety standards. Students should refrain from shorts, tank tops, and open-toed shoes while working on the technical aspects within the workshop.

Competition T-shirts shall be worn during any outreach activity and event. Closed toe shoes must always be worn to any competition, including off-season events.

Workspace Etiquette and Rules

Food and Trash

Treat the workshop like your grandma's house. If you eat something, throw the wrappers away. Pour out any unfinished drinks and throw the container away. If trash is continually left on tables or in the business office, food will be banned from the workshop entirely.

Food may be eaten in the main workshop, but not in the business office.

If you see that a trash bag is full, it is your responsibility to take it out to the dumpster. ***Please remember to shut the door when coming back in from the dumpster.***

Wolfpack Robotics/Red Thunder Robotics Laptops – Student Issued Laptops

The robotics program has 65 laptops for student use. These laptops are issued to LEGO, FTC, and FRC students. Please follow the guidelines below when using the laptop issued to you.

- **All laptops will be issued to students during the fall pre-season. It is the responsibility of the student to keep track of their issued laptop and to promptly report any problems with it to the Operations Team. Lost or missing laptops may be charged to the student/family in the amount of $300.**
- Use only the Robotics account on the laptop; do not create your own account.
- Do not download software without asking a Head Mentor in advance.
- It is your responsibility to take only the laptop that has been issued to you. Always check the laptop tag to make sure you have the one issued to you.
- It is your responsibility to return your laptop when you are finished and plug it in to the charging station.
- If you borrow a charger from the red box, it is your responsibility to put it back when finished.

3D Printers

We have 5 Bambu 3D printers. These printers are for robotics use only. Please do not set up personal 3D prints on these printers. Students may not use any of the printers without receiving proper training in advance.

Business Office Etiquette

To continue living our motto of being the closest thing to real life, our business office simulates a typical office environment. While not library quiet, this office is a quiet space for our videographers, marketers, awards members, and CAD designers to work. All members must be mindful of their noise level when in the business office. **Additionally, given the small size of the room, it cannot accommodate more than 8 people.** Spirit team may not use this space to make buttons or posters.

During work/build sessions, the desktop computers MUST be reserved for robotics work only. ***Please do not download games to these computers as they cause the equipment to operate slowly.***

Rules and Guidelines for the Workshop

All members must complete classroom safety training and basic tool training and turn in a signed lab safety contract. Members must follow all rules outlined in the safety training including, but not limited to, those listed below:

- No member may work without a mentor onsite. A mentor must be present in the machine shop when any power tool (battery or plug) is in use.
- When a member is finished using a tool, it must be returned to its designated space. At the end of every work session, 15 minutes must be dedicated to put away all tools and materials. The cleanup checklist should be used at the end of each build.
- If a member leaves before build is over, that member must clean for at least 15 minutes before leaving.
- Members are not allowed to leave the workshop before telling a mentor and signing out.
- If a power tool malfunctions or breaks, it must be reported to a mentor immediately.
- Electrical devices may not be powered by daisy-chaining cords or power strips.
- Always wear safety glasses and other PPE when operating power equipment or near someone who is operating power equipment. This includes any of our saws, grinders, sanders, and the CNC.
- If hair is long enough to be tied back, it needs to be.

- Loose clothing like hoodies need to be removed before working with any machine tools. This is especially true for hoodie strings and machinery/equipment that rotates.
- Closed-toe shoes must be worn in the workshop. They do not have to be steel-toed.
- While in the workshop, members must be focused on the task at hand. If a member is found to not be participating during a work session, s/he will be asked to leave the workshop. Horseplay and games in the workshop are not allowed.
- Mentors always have the final word in any situation in which safety is at stake.

Failure to follow these rules will result in disciplinary action.

Travel and Competition

Eligibility to Attend Competition(s)
Eligibility to participate in a competition is determined by the lead mentor(s). They will review a member's participation, skills, and contributions throughout the year. Similar to athletics, the mentors will conduct periodic grade checks, including the week before and the week of a competition.

To attend a competition, a student must:

- Be passing all classes (grade checks will take place no later than 48 hours before the team leaves for the event)
- Not have any disciplinary issues at school or on the team, and
- Be an active participant on the team.

Selected students will have their absence recorded as a school absence. It is that student's responsibility to notify their teachers of the absence at least one week ahead of time and arrange for completion of missing work.

A student must attend school for at least half the day to attend robotics functions outside of the school day.

Event Roles & Responsibilities
The week of competition, a schedule will be released. Members will be divided into roles needed for the tournament including scouting, pit crew, videography, photography, awards, etc. Members must maintain the roles that they are assigned throughout the competition.

An Event Captain will also be announced. This individual is chosen by the mentors and reflects the Core Values of FIRST while going above and beyond for their team. The criteria for this selection include attendance, timeliness, active participation, and attitude and character. They serve as a representative of our team; therefore, the chosen Event Captain will emulate our team's values and behavior.

At competitions, members are encouraged to watch matches, meet other teams, make friends, and look at other team's robots. However, this is a team-based event and most of the members' time should be with the team. When our team is in the queue for a match, all Team 7166 members must be in the team stands to cheer them on.

Members are not permitted to engage in unrelated activities without express permission from a mentor. Behavior that is deemed below team standards will result in disciplinary actions, up to and including dismissal from the team.

Gracious Professionalism at the Event
From the time a team enters the event, other teams are watching and forming an opinion. It is imperative we hold ourselves to a higher standard during events. Teams take other team's behaviors into account when deciding upon alliances. Teams have been put on others "no thank you" lists for poor behavior and a lack of Gracious Professionalism.

Any negative comments about another team should not be shared in the event space. There are ears everywhere!

Although “no thank you” lists are very real, we want to exhibit *Gracious Professionalism* by not letting a negative team interaction tarnish our perception of the entire team.

While your mentors encourage you to make friends with people from other teams, please **remember to share conservatively**. Again, this goes back to the alliance selection and “no thank you” lists. If you befriend someone and all you do is complain about people on our team, it is very likely they won’t want to partner with us.

Team Leadership

Red Thunder Robotics is led by a team consisting of student leaders and adult mentors. The leadership team’s duties go beyond those of regular members. This team makes administrative decisions, plans for the upcoming year, plans events, and manages projects. Most students on the leadership team are also Subject Matter Experts (SMEs) for their sub team, but this is not a requirement. Every member of the leadership team puts in **hundreds** of hours of work behind the scenes to make sure the team operates efficiently.

Student Leadership Team
Student leaders begin by participating in Student Leadership Seminar. This 15-hour-long training exposes student leaders to different personality traits and leadership styles, as well as how to work with others with unique personalities, delegate tasks, have difficult conversations with peers, run a meeting, and take minutes. The team also brings in a mental wellness professional to teach them how to recognize anxiety and burnout and how to support neurodivergent individuals. Students also help develop a strategic plan for the upcoming year.

The leadership team meets August through May, typically weekly. Leadership meeting attendance is restricted to the leadership team, but meeting minutes will be publicly available on Slack.

Students are encouraged to approach leadership team members with any relevant concerns.

One task of our student leaders is to take note of members’ participation and report to mentors during the weekly Leadership Team Meetings. If a student’s participation is found to be lacking, this feedback may lead to the lead mentor(s) meeting with the student and notifying his/her parents about the lack of performance.

Department Leadership Roles

Student Operations Leader
This leader oversees the FRC build schedule and daily build tasks as well managing the annual operation plan, the business plan, and securing grants and funding from sponsors.

Safety Captain/Junior Safety Captain
This leader is responsible for updating the team safety manual and for ensuring members are trained before any tool is used. The primary responsibility of this individual is making sure members, including mentors, work safely and follow safety guidelines. This person also runs weekly toolbox talks and maintains all the training documentation. The safety captain must know OSHA regulations, how to find the root cause to an incident and identify any incident trends. Additionally, this leader is responsible for any safety related questions that come up during pit interviews. The safety captain, along with the Leadership Team, organizes an outreach activity for Fire Prevention Month.

Subject Matter Expert (SME)
A sub team SME is typically the most knowledgeable student member of that particular sub team. All SMEs have demonstrated skill and knowledge in their area, either by completing their Level 1-3 FIRST Badge or by some other demonstration. Newer members are encouraged to seek out their SME before asking a mentor.

Departments

Departments support the whole team in completing necessary tasks so the team operates smoothly. New students are encouraged to float throughout all areas to see what is of the most interest. As a second year, students are encouraged to join and participate in one department and may join additional ones as long as they are completing the delegated tasks of their primary department.

Operations
This team is responsible for managing the operations of the team and works closely with mentors. They help write grant applications, updates the team budget, and generates the business plan. Operations also is responsible for the successful onboarding of new members, making sure each has been registered on *FIRST* as well as Slack. This team also finds potential outreach and service-learning events, and, along with their mentor, serves as the contact person for outreach events. The leader of this team, the student operations leader, manages the team deadlines and ensures that the team is adhering to the Sustainability and Business plan.

Awards (Impact and Pit)
Students who comprise the Impact Team work throughout preseason and early build season to write our Impact Executive Summary, Impact Essay, and Prepared Speech. The Impact Team will present an uninterrupted 7-minute presentation to judges during district events in hope of earning the coveted Impact Award. Attire for the Impact Team will include a team-provided polo shirt, black pants, black socks, and black shoes.

The Pit Awards Team will practice speaking to judges in a Q&A format, discussing the iterative design process the team engaged in during the seasons, subsystems in which we are proud, robot functions which are unique, and other information which can be used to judge our ability to earn the Quality Award, Engineering in Excellence Award, Industrial Award, or Engineering Inspiration Award. A member of the Pit Awards team is also a specialist in the non-technical side of our team, being able to explain: our team structure, how we remain sustainable, program initiatives, outreach, inreach, results and more. This information is used to judge the *Gracious Professionalism* Award, Team Sustainability Award, and Imagery Award.

Social and Digital Media
This team maintains the public image of Team 7166, its younger feeder teams, and Wolfpack Robotics through our online presence on Instagram, X, Chief Delphi, and Facebook. This team also submits press releases and articles to the local news. Members create sponsor decals for the robot, competition awards, team apparel, and publicity materials including banners, fliers, handouts, and displays. This department also works to build the Impact presentation PowerPoint Presentation or other media like one-pagers for judges.

Videography/Photography
The videography and photography department has the responsibility to document the happenings of Team 7166 as well as its younger feeder teams that make up Wolfpack Robotics. Members of this sub team use Adobe Photoshop and Movavi Video Editor to produce videos for our team YouTube channel and our social media platforms. This department is also responsible for producing the Safety Animation Award (in collaboration with the Safety Team) and the Impact Award (in collaboration with the Impact Team).

Website Development
This department maintains the team's website.

Sponsorships
Members of this department attract potential sponsors by raising awareness of the team and work to identify potential donors and sponsors. *This sub team is currently a mix of students from other sub teams.*

Design
This team uses Onshape to create drawings and models of parts and assembles them virtually to create a robot. Design will also have fabrication tasks which may include 3D printing and operating the team's CNC machine.

Software
Responsible for programming functions of the robot including any sensors and vision systems.

Fabrication
This team does the actual machining of parts and the assembly of the robot during the build phase. Jobs will vary and include running the CNC, cutting parts, working with power and hand tools, fabricating, assembling, testing, and prototyping. This team is also the one primarily responsible for building field elements each year.

Electronics/Electrical Wiring
Involved in the preparation and wiring of the robot and the workings of the various sensors and electrical components. Jobs include running wire, soldering, and connecting to the breaker/fuse board.

Drive Team
An FRC drive team consists of five roles: Driver, Operator, Human Player, Technician, and Drive Coach. Students will be selected for Drive Team based on several factors including coachability, attitude, attendance, ability to attend all events, and tryouts. Interested students are encouraged to apply for Drive Team each fall and will attend Drive Team tryouts. *Students on the Drive Team may not serve as members of the Impact Presentation Team.*

Social Media Policy

The following requirements apply for posts *about* the team using *your personal* social media accounts. If you are not part of the social media team, please do not post during workshop times:

- Posting about Red Thunder Robotics
  - Proper grammar and spelling
  - Be positive
  - Use approved hashtags
  - Tag our accounts
  - Use high quality photos
- Posting while working at robotics
  - Don't. We are trying to create a professional environment and workspace. The media team will post during work sessions; you are more than welcome to retweet or share these posts.
- Posting at a competition or event, fundraiser, or outreach event
  - Highlight the competition, the place, the environment, the stands, teams that stand out, etc.
  - Our robot is cool, but the experience is better!

Discipline Policy

It is up to the student to read all team documentation to understand their privileges and responsibilities on the team.

Participation in this team is an opportunity, not a right. When a student does not meet the requirements set forth, the following steps are taken:

- **Step 1:** The student will be counseled by a pair of mentors regarding the deficiencies and asked to make appropriate changes to remedy the situation.

- **Step 2:** The student's parent/guardian will be contacted, and a meeting will be scheduled to discuss the situation. The student may not return to the team or participate in team activities until the meeting has taken place.
- **Step 3:** The student will be suspended from the team for the next 2 team functions/events or a period of 2 weeks, whichever is longer. During this time, the student may not participate in any team activities.
- **Step 4:** The student will be removed from the team.

If offenses are egregious enough, steps may be skipped to the point of immediate removal from the team.

Parent and Student Contract

By signing below, I acknowledge and understand all points listed below:

- I have read the handbook describing Red Thunder Robotics and agree to follow the policies outlined
- I understand that I am required to actively participate and the failure to do so can ultimately lead to my removal from the team.
- Participation in the program requires: fulfillment of the team hours requirements; attendance at mandatory events; mentoring our FLL and FTC teams; and attendance at outreach/volunteer events and fundraising activities. I will comply with these.
- I will do my best to emulate *Gracious Professionalism* both in our workshop and during events. I understand that what I say to, and about, other teams can negatively affect my own team.
- The equipment used during the build phase can cause serious harm if not used correctly. I understand that I am not allowed to use any piece of equipment, including hand tools, until I have completed the classroom safety training and have been instructed on its safe use. I also understand that I am not allowed to use any piece of power equipment without a mentor present.
- I agree to allow my photograph(s), name, and comments to appear in media related to Red Thunder Robotics or Wolfpack Robotics.
- I understand that if I violate any of the team policies, I could be subjected to disciplinary actions up to and including dismissal from the team.

Print Student Name	Student Signature and Date
Parent/Guardian Name Printed	Parent/Guardian Signature and Date