
TRUCK TOWN THUNDER
FRC TEAM 68

Student Handbook



Brandon High School
Ortonville, MI



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VISION STATEMENT

FIRST Team 68, Truck Town Thunder's overall goal is to build a passionate team that encourages students to absorb new knowledge from dedicated team members while relentlessly having fun.

MISSION STATEMENT

"To inspire peers to be more excited about science, math, engineering, and technology by engaging them in a hands-on mentor guided life-changing journey that prepares everyone for the future."

TRUCK TOWN THUNDER VALUES

Truck Town Thunder lives by the values of FIRST. Gracious Professionalism® and Coopertition© both provide a foundation for all team members to be leaders that learn and work together to make the world a better place for everyone. The team members of Truck Town Thunder have a reputation for being helpful, knowledgeable and respectful. Gracious Professionalism® is an important value to Truck Town Thunder and the team has been recognized for displaying this value at past competitions. The team strives for a better society where teams, companies, and countries are all willing to work together for the betterment of the world. The "two brains are better than one" theory is felt by team members as they relate the fact that our team is a marriage of two schools which has increased the brain power when problem solving on the team, but also the collaboration of ideas to make life a little bit easier for both communities.

TEAM MEMBER RESPONSIBILITIES

COMMITMENT TO THE TEAM

When a student joins and becomes part of the T3 team, it is expected that the student makes a commitment to this team. Due to the intense schedule we must follow during the build and competition times, *we strongly advocate the student's commitment to our team over any other extracurricular activity i.e.: sports, cheerleading, band, clubs, etc.* In a rare situation, such as an important family matter, a parent will decide in conjunction with the T3 Board in advance to resolve the matter in a way that best meets the conflicting responsibilities. Even though all students interview for the team, participation is a privilege, not a right. Students, who are members of the T3 team, represent General Motors, their community, their team, their school, their family and themselves. For this reason, conduct on and off the playing field should reflect the highest values and standards.

GRACIOUS PROFESSIONALISM

One of the major tenets of FIRST is Gracious Professionalism. Gracious professionals learn and compete like crazy, but treat one another with respect and kindness in the process. They avoid treating anyone like losers. (*i.e.* No smack talk) Knowledge, competition, and empathy are comfortably blended. It's a team member's duty to remind a student or mentor in violation of the team's expectations regarding gracious professionalism to behave in a graciously professional manner.

From our team members, we want to see;

- Respect on and off the playing field.
- Team Players
- Team Unity
- Respect for property at the host facility and at any event where we participate.
- Good Sportsmanship. Deal with winning or losing in a humble fashion.
- Demonstrate personal growth and self-control.
- Positive attitudes
- Team spirit
- Demonstrated support. You will be treated as professional, but you also need to respond and behave as a professional.

COMMUNITY SERVICE

Throughout the year, we ask that all team members participate in sharing themselves with others besides the T3 team. This year's students will be required to participate in community service projects that will be scheduled by the advisory committee. We believe this builds strong character and pride of our community. Team members are responsible for doing 20 hours of community service 75% of which (15 hours) must be team sponsored community service events. Students should always wear their team uniforms for these events. Some past events were:

- Adopt a Road, is an activity where the team works with the Oakland County Road Commission to keep a section of Dixie Highway cleaned up. This is generally three times a year.
- Truck Town Thunder Youth Program, all team members are expected to help mentor teams in our youth program.

- Desert Angels, is a volunteer organization that packages “care packages” for troops stationed overseas. T3 not only assists in packing of the care packages, but on occasion will help raise funds for shipping costs via “survival bracelets” construction and sales.
- FIRST in Michigan Events
- Helping to host Mid-Michigan Robotics Alliance Events

Required:

- Helping to Host the Bloomfield Girls Robotics Competition
- Helping to Host the Brandon Expo

FUNDRAISING

General Motors has been very supportive of our robotics team; however, they are unable to cover all of the team’s expenses Therefore, fundraising is necessary for the team to provide registration fees, parts and supplies, uniforms, travel and food expenses, trading items, etc. This year’s fundraising activities will include:

Required:

- Renaissance Festival. Team will work on Saturday’s and Sunday’s during the festival preparing turkey legs. Profit to the team will be \$20,000.00 if we work all days. (15 – 16 days = 7 weekends, Includes Labor day)
- Truck Town Thunder Partner Drive
 - Reaching out to the community in order to spread the word of FIRST while gaining new partners and gathering donations.
 - The partnership drive not only spreads the words of FIRST, but also lets the students learn how to “sell an idea” to fund, for example, a future project in the “working world”
 - Each student is expected to raise at least \$450 - this is composed of \$200 in “participation fees” as well as \$250 to fund the scholarship fund
 - The partnership funds are expected to be turned in - or a payment plan on file - before the Christmas holiday break
- Additional team-based fundraisers may arise to fully fund team activities. **Depending on the funds needed, we may participate in more or less fund-raisers.**

If all guidelines are not fulfilled, students may forfeit their right to travel to a competition, be placed on probation and possibly face expulsion from the team. Each team fund-raiser will be dealt with on an individual basis, since the guidelines for each one are not necessarily the same. Documentation will be recorded on all fund-raisers.

DEMONSTRATIONS

All team members are expected to participate in one or more team demonstrations to help spread FIRST Robotics to the community.

CONDUCT OF TEAM MEMBERS

Individual conduct and appearance is part of the professional expectations of the team. It becomes the responsibility of all team members to conduct themselves in a proper, businesslike manner at all Truck Town activities from the time they leave home until they return home. All activities of the members of the Truck Town team should contribute to the success of the team. Knowing that any organization is judged largely by the behavior of its individual participants, the following items in the Student Handbook are to be subscribed to by team members, mentors, advisors, and guests who attend a Truck Town team activity. Actions that could be construed as detrimental to the Truck Town FIRST Robotics team may be cause for probation/suspension/termination from the Truck Town team.

These actions include:

- Poor attendance
- School progress report ineligibility
- School disciplinary problems (such as detentions)
- Unfulfilled participation in fund raising
- Possession or use of controlled substances including alcohol, tobacco products, drug paraphernalia or mood altering chemicals
- Vandalism or accidental destruction to property with no restitution made
- Assault
- Theft
- Harassment

BUDDY RULE

At team functions, the “buddy rule” is required to be followed at all times. Students will not be allowed to move about at a team event without another team member with them. This rule is set in place at all competitions and events. When leaving the venue; for lunch or

for trailer runs, you are expected to take a buddy and get permission to leave. Students who are unable to follow this rule will be asked to not attend competitions and may be asked to leave the team.

ATTENDANCE

It is expected that team members attend every full team meeting. Attendance and performance reports will be noted at all meetings. Planned absences/tardies/early departures must use the excused absence form: <https://docs.google.com/document/d/1-ADsOwF-rvKgxfrFq42vcUzH0bWYhDR9BSTGm2KGsg/edit> and also available in Slack. Late arrivals and early departures will be recorded. If you are going to miss a meeting because of an emergency such as illness, you - the student - must contact Mr. Fenn via Slack (preferred), text or phone call (586-623-2879) or eMail. Please be prepared to explain the absence. Both excused and unexcused absences will be recorded.

While in attendance at meetings or competitions, it is expected that students will be participating in team activities. Meetings are not the time for homework, etc. While there may be times when not all team members are actively engaged in a "core activity", the very nature of FRC means that there are always minor projects/activities such as cleaning, sorting unused parts, special projects, etc during almost all team meetings. If you feel you have nothing to do, contact your sub-team leader(s), Project Managers, mentors, or team leaders. Students are expected to keep their grades up, but time management is something that all students will need to learn. If, on rare occasions, a student needs extra time to focus on a school project, they may fill out an excused absence form. Note that missing meetings for homework or school projects should be infrequent - excess excused absences can lead to forfeiture of attending a competition and/or meeting with the Advisory Board for review for potential probation/suspension/termination.

Unexcused Absences--- After two unexcused absences you will have to meet with the advisory board. After four unexcused absences, you will need to meet with the advisory board to discuss whether the team is the right fit for you and your schedule. Examples of unexcused absences:

- Conflicting work schedule - students need to make sure to work with their employer to coordinate their work schedule.
- Conflicting activities - Robotics should be a priority above other elective activities
- Failure to notify Mr. Fenn at least 1 hour prior to the start of the meeting

Excused Absences--- After four excused absences you may forfeit the opportunity to attend a competition, be placed on probation and may have to meet with the advisory board to discuss whether the team is the right fit for you and your schedule.

Examples of Excused Absences:

- Need to study for a test or doing homework - students need to learn time management, so this should be infrequent. It is important for the student to make sure they are meeting their school obligations and making it to team meetings.
- Fall Sports
- Spring Sports
- Required Band activities due to it reflecting a grade in school
- Remote Team Members
- Business Professionals of America State Championships
- College campus visits

Tardiness--- Four tardies and you will meet with a member of the advisory board.

Early Departures--- All students must sign in and out when they arrive and leave. Early departures must be approved by Mr. Fenn. If students leave without approval, they will meet with the advisory board and may forfeit the opportunity to attend a competition.

BEHAVIOR AND DRESS

All persons shall demonstrate gracious professionalism; behaving in a courteous and respectful manner, showing good sportsmanship, teamwork, team unity, self-control, positive attitude and support for others. Team members must refrain from language and actions that might bring discredit upon them, their school, their home, their friends, FIRST, or upon the Truck Town Team. Being in the willful companionship of someone who violates any portion of the Student Handbook, or failing to report any direct knowledge of the Student Handbook violation can result in dismissal from the team.

Horseplay is not allowed. Students must be mindful of their personal safety and the safety of those around them.

Brandon High School dress code will be enforced. Visit the Brandon High School website for details – <http://www.brandon.k12.mi.us/>
For reasons of safety, there are the following additions to the school dress code:

- Closed toe shoes are required in the shop.
- Hair must be pulled back when working on machines.

- Loose clothing and jewelry may not be worn in the shop while working on machinery. (Form-fitting watches are permitted) This includes “danglers” such as sweatshirt strings.
- Students will wear pants or school appropriate shorts at all Build Sessions and Team Meetings.
- Clothing should not have any large holes or tears because of possibility chip and snag issues.
- Students must wear their safety glasses at all times in the shop. Other personal protective equipment (PPE) should be worn as needed.
- PPE includes gloves when handling sheet metal, but gloves must NOT be worn around rotating machinery (drill presses, hand drills, lathes, mills, etc.)
- While in an active shop, ear buds may NOT be worn. These are NOT hearing protection and the audio content can distract from operating equipment

Violating of the team dress code will result in a warning or possible conference with the disciplinary board. Students must be trained before they use any machinery. Students must use machinery wisely. Failure to do so will result in a meeting with the disciplinary board. Adult students (over 18 year old) shall abide by the rules and regulations for a minor student.

GRADES

Team members also have a responsibility to their schools as well as the team. During the season, students will be asked to submit a school progress report periodically before and during build and competition seasons or at the Advisors’ discretion. This will ensure that schoolwork is being kept up and that grades are not damaged by the commitment to the team. Students will become ineligible to participate in team activities if they fail to maintain a current minimum 2.0 GPA and/or receive a grade below a C (75%). Students receiving a grade below a C (75%) will be given two weeks to raise their grade to compliance. If a student is unable to raise their grade above a C (75%), a two week probation period will be instilled followed by a leave of absence. Failure to turn a grade check in on or before a due date will be treated as not meeting the minimum grade requirements,

PUBLIC DISPLAYS OF AFFECTION (PDA)

In order to ensure a professional environment on the team, the team will not allow any forms of PDA while a team member is representing the team. Hand Holding, Kissing, and sitting with arms around each other are all examples of PDA. We intend to keep the robotics program a professional one and this will not be tolerated. NOTE: This includes when a team member is in uniform away from the team. A team member represents the team while in uniform and must conduct themselves as a professional.

COMPETITIONS

Team members attending the competitions are required to attend the whole competition. While at competitions, students are expected to perform their assigned duties. Team members are required to remain with the team throughout the entire competition. Failure to do so will result in ineligibility to attend future competitions. Students are required to ride to and from competition with the team. Exceptions may be granted due to emergency situations or with prior consent given by the Advisory Board. If a student is leaving a competition with a parent, a release must be signed before leaving.

The following are expected of all team members:

- Students shall keep their adult advisors informed of their specific activities and whereabouts at all times. Students may not use their own cars or ride in cars belonging to other students during the competition.
- Uniforms must be worn at all times during the competition as instructed.
- Safety glasses must be worn at all times by all team members and their guests while in the pit areas.
- While the team is competing, all students not on the drive team (including volunteers) should be in the stands showing their team spirit and supporting their teammates.
- Students will be required to meet specific guidelines in order to travel with the team. Students must also meet these requirements in order to be considered to represent the team at competitions.

HOTEL BEHAVIOR/CURFEWS

Team members are guests when using the facilities, and special care should be taken to not deface or destroy any property. Individuals, who inflict damage to the hotel rooms or the building, will be held liable for any costs incurred for repair and will be sent home at the student’s expense. Curfew regulations shall be interpreted to mean that each person shall be in his/her hotel room by the published or stated curfew. Each student shall remain in his/her room until a predetermined time the next morning. Room checks will be made nightly by advisors. Once a room check is made, students may not leave their room. If these guidelines are not followed, they could be dealt with on either an individual or team basis and the student(s) may be sent home at their own expense. Each student will be given the room number and phone number of the advisor(s) to call in case a problem arises during the night. Students of the opposite gender are NOT ALLOWED to enter each other’s room. When possible we will have a designated room where students can socialize, play cards or watch movies together, while being supervised by an advisor or adult chaperone. Only people who are on the official Truck Town team travel roster may be in a Truck Town hotel room. Students from other teams, friends and family members may not be in Truck Town team rooms after curfew.

DISCLAIMER

No alcoholic beverages, illegal drugs, or tobacco in any form shall be possessed or used at any time or under any circumstances on public or private properties. Use or possession of such substances may subject to criminal prosecution and dismissal from the team. Possession of a weapon or use of an object in an unsafe or dangerous manner capable of causing bodily harm or fear of life, defacing or stealing any public or private property will result in dismissal from team and will be reported to the proper authorities. Serious misconduct shall be reported to advisors, parents, and if necessary, the proper authorities. Advisors are responsible for the supervision of conduct. Student delegates who disregard the Student Handbook will be subject to disciplinary actions, and may be sent home at their own expense and will be disqualified from competitive awards. Parents and school district officials will be notified. Any further disciplinary action will be determined by the Advisory Board action and may result in student dismissal from the team. These examples are not the only acts or conditions for which suspensions or expulsion may be warranted nor do they in any way limit disciplinary action for any student behavior that is determined to be unbecoming as a team member. All alleged violations will be reviewed before any action is taken and the Advisory Board will ensure that all causes will be taken under consideration.

SCHOLARSHIP

Each student who graduate from the team will receive a scholarship. The value of the scholarship is based on the number of years the student was on the team - \$250 per year. It is a reimbursement scholarship.

To receive the scholarship:

- The student must graduate from the team while meeting the following requirements:
 - Maintain a 95% or better attendance at all mandatory meetings and 10% or better attendance at "build sessions" where their subteams have assignments
 - While in attendance at meetings or competitions, participate in team activities as needed. This may include scouting, presenting, working on the robot, or cheering or other assignments as requested by student and team leadership
 - Complete a minimum of TWO robot parts each and every build season
 - Complete required turkey shifts
 - Participate in partnership drives every year. While the official target is to achieve the targeted funding target each year, the assigned partners may not be able to participate every year. The advisory board will review those cases.
 - Participate in at least one community outreach event each year and complete assigned community service hours
- The student will be presented a certificate with the scholarship value at the end of year banquet their Senior year
- The student must complete a Brandon School District Check Request form, and attach an official copy of their school schedule, and receipts for the items being reimbursed: These items can include books, equipment, computer, special expenses such as lab fees, or a combination of these. This packet must be turned in to the T3 Team Leader for approval and forwarding to the BSD Business Office
- Only a single check can be cut for each scholarship. In other words, all receipts must be included with the packet.
- The scholarship must be claimed by June 1 of the year AFTER the student graduates

APPENDIX A - TRUCK TOWN THUNDER TRAINING GUIDE

| Training Session | Complete | Basic | C/M Lead | Elec Lead | Prog Lead | Pit Crew | Drive Team | Strategist | Presenter |
|----------------------------------|----------|-------|----------|-----------|-----------|----------|------------|------------|-----------|
| Shop Safety | | X | X | X | X | X | X | X | X |
| Hand Tools 1 | | X | X | X | X | X | X | X | X |
| Hand Tools 2 | | | X | | | X | X | | |
| Welding Exposure | | X | X | X | X | X | X | X | X |
| TIG Welding | | | | | | | | | |
| Fasteners | | X | X | X | X | X | X | X | X |
| Sheet Metal/Plastic | | X | X | X | X | X | X | X | X |
| Power Tools 1 | | X | X | X | X | X | X | X | X |
| Hand Drills | | X | X | X | X | X | X | X | X |
| Lathe | | | X | | | | | | |
| MotoTool/Dremel | | | | | | X | X | | |
| Reliability | | X | X | X | X | X | X | X | X |
| DC Motors, Torque, Speed & Power | | X | X | X | X | X | X | X | X |
| Drivetrain Design | | X | X | X | X | X | X | X | X |
| Object Manipulation | | X | X | X | X | X | X | X | X |
| Mechanisms | | X | X | X | X | X | X | X | X |
| Belts, Pulleys, Chains | | | X | | | | X | | |
| Electrical 1 | | X | X | X | X | X | X | X | X |
| Electrical 2 | | | | X | | | | | |
| Controls 1 | | X | X | X | X | X | X | X | X |
| Programming 1 | | X | X | X | X | X | X | X | X |
| Programming 2 | | | | | X | | | | |
| CAD 1 | | X | X | X | X | X | X | X | X |
| CAD 2 | | | X | X | | | | | |

| | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|
| Documentation | | X | X | X | X | X | X | X | X |
| Game Analysis 1 (Define Objectives/Scoring) | | X | X | X | X | X | X | X | X |
| Game Analysis 2 (Cost/Benefit) | | X | X | X | X | X | X | X | X |
| Game Analysis 3 (Prioritization of Tasks) | | X | X | X | X | X | X | X | X |
| T3 History | | | | | | X | X | X | X |
| Leadership 1 | | X | X | X | X | X | X | X | X |
| Leadership 2 | | | X | X | X | | | X | |
| Public Speaking | | | | | | X | X | X | X |
| Robot Rules | | | | | | X | | X | |
| Game Rules | | | | | | | X | X | |

APPENDIX B: TEAM HISTORY

Truck Town Thunder was founded at the General Motors Truck Product Center in 1996 as Truck Town Terror, first competing in the 1997 FRC competition season. In the early years, T3 recruited from as many as 12 high schools in Northern Oakland county. T3 remained a valid FRC team supported by GM and fluctuating in size as several of the original “source” high schools started their own FRC teams. During this time, the team name was changed after September 11th, 2001. As GM reorganized and closed some facilities the team was also relocated into an open bay in the Pontiac Centerpoint Campus West. By the 2009 season, as GM went through bankruptcy, this facility was closing and the team believed they would be forced to fold. As the 2009 season wound down – T3 was on the runner-up alliance on Einstein – the then-team leadership reached out to the two remaining schools that students were recruited from – Holly and Brandon High Schools. Neither school was able to take on any financial burden, but as the team was self-funded, and with the support of the STEM and shop programs at Brandon, the team relocated to BHS in late spring and through the summer of 2009. As the team settled in to their new location, they continued to be a competitive FRC team – some years more so than others, but with every student for many years proceeding to college, some earning scholarships and internships based on their T3 FRC experience. During this time, even as a small team, multiple district Chairmans’s and Engineering Inspiration awards were earned. As of 2018, T3 is a Brandon-only FRC team, and continues its long tradition of inspiring students.

See the T3 website - <http://www.trucktownthunder.com/> - for videos and other additional information.

REVISIONS

| Date | Person | Updates |
|-----------------|---------------|---|
| 28-Nov-2016 | Andrew Spiece | 2016-17 version |
| January 4, 2017 | Gary Fenn | Remove references to Andy/replace with Debbie and Gary as co-leaders. Minor grammar errors corrected. (Never published) |
| July 4, 2018 | Gary Fenn | Updates for 2018-19 year. Remove Chairman's and Business plan. |