



Lightning Robotics

Team Handbook

Purpose

This Handbook is an informational guide book for the conduct of the Lightning Robotics team members and mentors.

Mission Statement

Our goal is to provide High School Students with the opportunity to learn from mentors in the field of engineering. To expose them to a real life atmosphere in a hands on engineering project. To meet the challenge of the thought process from the beginning to completion. Enter friendly competition with the desire to do well and overcome any obstacle encountered and deal with it through what they have learned. And in the spirit of FIRST, have fun doing it!

Mentor Goals

- Promote, teach and maintain a SAFE working environment at ALL times.
- Provide the opportunity to build leadership and teamwork
- Break down walls of diversity and build self-esteem
- Promote gracious professionalism and the Ideals of FIRST
- Encourage education in Science and Technology
- Promote the importance of education, teaching and learning
- Have FUN!

Goals

- Outreach to the community – generate awareness of and pride in, our team, school, Company and community
- Improve our community through service projects
- Become a more professionally organized team

Team History

FIRST is an acronym for: For Inspiration and Recognition of Science and Technology. Since 1989, FIRST has existed with an imperative singular focus: to excite more young people about the fun, accessibility, and importance of science and engineering. FIRST is a non-profit organization founded by Dean Kamen to interest and inspire students in mathematics, science and technology. They work together with high schools, colleges and corporate sponsors toward these goals through programs such as the FIRST Robotics Competition.

The team is composed of students from nearby Plymouth, Canton and Salem High Schools along with other schools in the area without a team. Other participating schools have included: Catholic Central High School, Marian High School, and Plymouth Christian Academy.



A year-by-year summary of the team is available on the team's website.

Team Organization

The team is run by a board of students elected at the end of the school year, and they hold office for one year. There are four positions President, Vice President, Treasurer, and Secretary. These students are responsible for the running of the club, and are overseen by the adult mentors and Mr. Obsniuk.

Safety

The responsibility of safety lies with each and every member of Lightning Robotics. Each team member is required to abide by the safety practices of all mentor facilities.

Safety is the number one priority of Lightning Robotics. Almost all aspects of the project involve the use of tools and equipment that are potentially dangerous if not used properly. As a member of Lightning Robotics, you will need to understand that safety is your number one priority.

It should be understood that the Student Members of Lightning Robotics are viewed by the Mentor Team as young adults, acting much like employees of an organization. It is important to maintain a positive image to our community, sponsors and FIRST, and this begins with safety. All Lightning Robotics members must know and demonstrate safe and professional behavior wherever the team conducts its business. One-on-one contact between an adult and student should be avoided for the safety of both. Unless where an adult and student must work together one-on-one, they should be in the view of other adults and/or students.

Important Team Contacts

The Team website contains e-mail addresses for mentors and team members.

KNOW WHERE YOU ARE LOCATED !!!

Mr. Obsniuk's Room

46181 Joy Road, Canton, Michigan 48187-1416

Location: Mr. Obsniuk's room number is 1338 at Salem High School.

Designated Robotics Areas

All team members should always stay in the areas designated for the robotics team. Travel outside of the designated robotics areas should always be accompanied by a team Mentor. Special permission may be granted to other areas on an as-needed basis. For safety, when students are at any mentor facility they should have a mentor present at all times.

Music

The playing of music in any work area will be allowed so long as it is not disruptive to others. For safety, the wearing of personal music devices will not be allowed in any of the work areas or meeting rooms. No music will be allowed in the pit area.

General Tool Usage



The use of tools is a necessity for most members of the team. Tools should always be used in a safe manner. Only adequately trained team members may use tools – no exceptions. Always remember that tool usage is a privilege and not a right, so use them responsibly. Talking to a mentor before using a tool is required.

Power Tool Usage

General tool rules also apply to power tools, with the exception that power tools are only allowed to be used with direct permission and supervision of adult mentors.

Emergency Situations

In the case of an emergency: find the nearest Mentor, tell them who and where you are and follow their instructions. For all severe medical emergencies as required dial 911 first. Go to a mentor immediately and inform them of the situation.

Transportation

Transportation to and from meetings and team activities is the responsibility of each individual student. Club meetings are held after school. The schedule and location will be available once school is in session. Special team meetings should not interfere with any weekly scheduled team meetings and should be scheduled on days other than Wednesday. Carpooling is encouraged, and rides can be coordinated on the team website.

Student Team & Meeting Requirements/Involvement

Involvement with Lightning Robotics provides excellent opportunities for higher learning. Being a team member also provides an excellent addition to college applications as well as resumes. The FIRST organization provides many joint scholarship opportunities for interested students. This is a student driven program that teaches the students to be innovative, think for themselves, and problem solve.

Each student will have a one on one interview with the Mentor Team and veteran team members.

Each student is recommended to have and maintain a notebook for notes, brainstorming, sketches, pens, pencils etc. at all meetings.

Communications

There will be one primary form of communication used on this team. We have a team website that you must join to receive team email notices and current news. This will include meetings, meeting minutes, list of members, schedules and any changes throughout the year.

There will be hand-outs and permission forms sent home with you, received either at the school or at the meetings and may include dates, times, phone numbers and some form requiring parental signatures. The schedule for competition will also be included once it is finalized, or check the FIRST website.

Both student and adult team leaders will do their best to make sure all information is communicated. It will be announced at meetings and on the web site. However, it is the students responsibility to stay informed.



Team Website: www.lightningrobotics.com

Team Email Address: 862.FIRST@gmail.com

Scholarship

Lightning Robotics promotes strong academics; therefore it is important for students to maintain academic excellence. In all situations school comes before robotics, and at the discretion of the parents, poor academic achievement can result in the student leaving the team.

If students achieve minimum leadership and scholastic standards, as well as participate in enough hours of team activities, they will be eligible to apply for an academic letter.

Behavior

In Lightning Robotics each student member is a respected young adult. Each student is expected to be respectful of all team members as well as other individuals that the team comes in contact with. As well, professionalism is a must from each student. Students are also expected to adhere to the Plymouth/Canton/Salem School Code of Conduct at all times.

Health Information

It is not necessary to have a physical on file however if the student has any health concerns that the mentors should be aware of it should be brought to the attention of Mr. Obsniuk and the adult mentors.

Uniform for Competition (Primary)

Definition of your uniform is the shirt supplied by the team, as well as team hats or team sweatshirts purchased individually. Team spirit and group cooperation is exemplified by the uniform. The uniform that we wear is an important part of our image. You will be required to wear it on the days and during the times of our competition. You will also be responsible to keep it clean and in good condition. No changes or alterations should be made to this uniform.

Alternate Uniform (Secondary)

Any uniform (T-shirt or other) created by the students for use on practice days or after the day of competition must be approved by the Mentors and Board members. These shirts should include all sponsor's names, logo or both, school names, and state. They could also include team members, nicknames, team name (logo), and FIRST Robotics.

Cell phones, pagers, and cameras

As they are good for keeping in touch with others they can also be distracting to someone near you and during the meetings. We ask that you move or leave the room to use it during all meetings. When possible keep it on vibrate or turn off the phone completely. This goes for any kind of camera whether it is on a phone or not.

Food and drinks

When working at the build site near any electrical/electronics or at competition in the pit area, open fluids should be kept away in case of accidental spillage. Only re-sealable



containers should be used for all beverages and those that are not, should be outside and away from the robot, its components, electronics, computers and crate.

Boyfriend/Girlfriend

In situations where a relationship develops or is on going between team members, students should follow guidelines outlined in the PCEP student handbook. Furthermore, when students are at competitions and team activities, they should not appear as a couple, but rather as members of the team.

Student Awards

Lightning Robotics strongly supports positive reinforcement and at the end of each season, at the team banquet, awards are presented to students possessing extraordinary achievement. Some of the possible awards are as follows:

- Gracious Professionalism
- Most Innovative
- Creativity
- Most improved student
- Sportsmanship
- Most Dedicated
- Most Team Spirit
- Rookie of the year
- Best Sense of Humor in Adversity

Website and email usage

Your team website must be used for Robotics and Team business only. We all must use some caution and discretion when using our website. It may be accessed by our sponsor, potential sponsors or other teams, so professionalism must be observed. The rules that cover your website also include all other FIRST Robotic websites. Any abuse of email brought to the attention of the Sponsoring Company, Mentors, or student leadership will be dealt with and a warning will be given to that individual. If the student fails to cease their actions: the student's parents will be notified by the school of possible disciplinary action as outlined in the School's Code of Conduct.

Disciplinary Actions

Your school's Code of Conduct will followed during your time at team functions. Violations of the rules outlined in this Team Handbook are taken very seriously. The discipline given may vary from case to case and severity of the issue. In all cases the decision will be as fair and objective as possible by the Mentor team. Possible disciplinary actions can include suspension for the remainder of the day, week or season or activities such as competitions; probationary period; demotion from leadership positions; the contact of parents or guardians and or school officials; up to and including permanent dismissal from the team. Disciplines may be tailored to meet the needs of the situation. Discipline will be decided by more than one Mentor after reviewing the situation – if the situation allows for this. Whereas the Mentors are not always allowed to discipline a student, that student's name and infraction will be handed over to their school for their review.

Financial / Fund raising



Students will be required to pay for various expenses. Total travel costs to an out of state competition generally range from \$300 - \$400 per student, depending on location and travel arrangements. Several fund raising activities will occur throughout the year. Some of these will be strictly to help pay for team expenses, while others will be available to help defray the student expenses.

Each team member will also be expected to pay an annual fee to cover the costs of the team uniform, which is the student's to keep, and it also pays for the food RPM brings to the build meetings and banquets.

Student Involvement

To be able to participate in regional and national competitions as well as special team events students must exhibit a fair level of team involvement. Just coming to meetings is not enough.

Some examples of positive team involvement are as follows:

- Obtaining personal goals and objectives
- Helping with team fund raising activities
- Undertaking responsibilities and following through with them

Negative student involvement also exists, some examples are:

- Disruptive behavior
- Talking during meetings / presentations
- Lack of Consistent Attendance

Parent's Involvement

We encourage all parents to become involved with the RPM Booster Club. Check the team website for more information on getting signed up.

The Robotics Parents and Mentor (RPM) booster club is a non-profit organization established to support Lightning Robotics. The RPM membership consists of parents of Lightning Robotic team members, volunteer Mentors from the business community supporting the team, and at least one student representative from the team. The RPM, through fund raising drives and soliciting donations, wishes to ensure that all participants of the Lightning Robotics team have the best possible resources available to them as they participate in club activities and FIRST competitions. RPM will provide support for the team meetings (as requested by Mentors and team members), chaperons for travel, and organize team celebrations.

*Parental involvement for any sponsor on-site visitation may be restricted due to their association with competitive companies of that sponsor.

Mentor Team Requirement / Involvement

Team Mentoring provides for a vast amount of rewards but it also requires a high level of responsibility. The actions of Mentors are reflected onto the students whom they mentor. Appropriate conduct is an absolute must. Patience and professionalism are key characteristics of mentor-ship. The primary role of a mentor on this team is to teach and to facilitate. Due to Lightning Robotics' size and current resources, some activities must be done by Mentors. Though, if time permits, our rule of thumb is – if a student can perform a



task let them do it, but if they can't, then teach or train them. Some activities such as machinery operations must be done by mentors, or other outside source and remain the ultimate responsibility of the mentor team.

Mentoring provides the opportunity to share bits and pieces of knowledge and experience that each has gained through life. It also provides an excellent opportunity to improve skills, learn new things, and be challenged. An excellent mentoring guide can be found at the FIRST Robotics website.

A very important consideration to mentor-ship is that participation is 100% voluntary. Each mentor should expect to perform team duties on their personal time. Some exceptions will exist based upon sponsor management or Plymouth / Canton / Salem High School approval. Some of these may include competitions; corporate, school or community presentation; as well as corporate meetings and functions.

Lightning Robotics realizes the amount of time and effort involved in mentoring. The Mentoring Team will try to help out one another in any way possible to help be part of the team. Some of these may include providing the easiest schedule possible to maintain mentor involvement, providing time off from the team when needed, and providing the maximum funds available to help defray personal costs.

Meeting Outline / Work Schedule / School Days Missed

Meeting schedules vary from meeting to meeting depending on current needs. Primarily, we will be meeting at in Mr. Obsniuk's room. Plan to arrive at a meeting no later than 4:50 pm with the meetings beginning promptly at 5:00 pm and ending at approximately at 6:30 pm. Meetings are generally led by student officers.

During the build season (late December until around March) the entire team, or portions of the team, will possibly meet every day(rarely on Sunday). It should be understood that this schedule is rigorous. During the competition season 9:00 pm is the planned adjourning time for the meetings. If the team decides to stay later than planned, students will be required to obtain permission from home a minimum of one hour before the planned adjourning time. Certain events such as competitions will require missing days of school depending on the number of competitions, which can typically range from two to seven days of missed school. At any time, a quiet place is available for studies and homework when at robotics. After the end of the build season as well as several times during the off season the team will take breaks.

During the off season and during the student's summer break the team's officers (and any member is welcomed) will normally meet once per week unless team activities require additional days, such as fund raisers and soliciting funds from potential sponsors

Meeting Area Cleanup

At the end of each meeting you are all responsible to replace all tables to their approximate location and chairs pushed under tables. Basically leave the rooms in the condition you found them or in better condition than you found them.

Remember: *You are visitors at these locations and not at home. It is possible to lose this privilege!*

Miscellaneous



This is a living document. It will continually grow to meet the needs of the team. Suggestions for revisions are always welcome and are taken for consideration.

Additional team policies and updates will be posted to the team website.

At no time will any student be put into a one-on-one situation with any adult or in any situation where the student feels uncomfortable or threatened. If a student ever feels uncomfortable with anyone on the team, including other students, mentors, parents or teachers, he or she has the right to bring the issue to any responsible adult on the team.