



Saint Paul Central Robotics

First Robotics Competition (FRC)

2022-2023 Team Handbook

Welcome

Welcome to the Central Robotics 2022-2023 season! This handbook contains information for families and team members to help ensure the best possible experience for students in the program. To that end it covers the following:

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Program Overview

Saint Paul Central Robotics is a student driven program, supported by adult mentors, designed to give high school students from all backgrounds opportunities to explore and develop engineering, programming, business, teamwork, and leadership skills in a positive and supportive environment through challenging and exciting competitions.

Saint Paul Central Robotics participates in the FIRST organization's FTC and FRC robotics competition structures. Our FTC team is structured towards students with little to no previous experience with the different aspects of robotics. The mission of the FIRST organization is to inspire young people to be science and technology leaders and innovators by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

Team Communications

Team members are required to keep themselves informed regarding meetings and other important announcements. These will be shared on Slack and Schoology and by email as well as in our weekly newsletters sent out by email. (Students should be checking all at least once a day) If you have any questions please reach out to the following email addresses:

John Lavik, Coach and Lead Mentor

coachjohn4536@gmail.com

Jim Nichols, Coach and Lead Mentor
jim.k.nichols@gmail.com

Hadley Ninow, Team Co-Captain
hninow002@stpaul.k12.mn.us

Quinn Skelton, Team Co-Captain
gskelton001@stpaul.k12.mn.us

Practice Schedule & Expectations

The Central Robotics program runs almost year round, but there are significant seasonal differences and important dates to keep in mind. Meeting schedules vary in days and length throughout the year as needed. This is a general outline with required meetings, but is not an exact schedule of all activities. In addition to regular meetings, there will also be outreach and fundraising events and all team members are required to participate in some of these. (Exact requirements below.)

We divide the year into roughly these times: **Pre-season** (September - December); **Build Season** (January - March/April); **Post-season** (after our last competition until end of school); **Summer**.

Pre-season is a time for learning core concepts and skills and for newcomers to decide if they want to join the team. Meetings during the pre-season are not required, but attendance will be considered when applying to join the team.

During the FRC **build season** we have meetings every Tuesday, Thursday, and Saturday with optional Friday meetings in rooms 1311 and 1309. It is expected that students attend at least 70% of our required meetings during the build season in order to go with the team to the out of town competition (further information below). Three or more absences from required meetings will likely result in removal from the team. If a student cannot attend a meeting they must notify the team at least a day ahead of time.

Post-season is after our last competition and is a time to decompress, reflect on lessons learned, select new leadership for the coming year and generally enjoy our time together. These meetings are generally optional, although there could be one or two required meetings to conduct team business.

Summer is a time for special, fun, and challenging projects as well as preparation for next season. There are opportunities to plan out and create your very own projects and ideas! These meetings are always optional.

Unexcused vs. Excused Absences:

The coach and mentors will decide all excused and unexcused absences. Let this be very clear... both excused and unexcused absences count against a team member's meeting attendance. However, two unexcused absences will prevent a team member from receiving a Varsity Letter, regardless if they qualify by every other metric.

Examples of excused absences:

- Illness
- family emergency
- Wedding
- preplanned family vacation
- occasional school/academics (part of being a team member is being able to balance both academics and athletics)

Examples of unexcused absences:

- simply not showing up
- play dates with friends
- did not feel like it

Attendance will be recorded at each meeting by student sign-in (electronically). For a missed meeting to be considered excused, the student must notify the team a day in advance in the Slack *#attendance* channel or by email to a coach or captain. If a team member misses a meeting, it is that student's responsibility to follow up with the coach or mentor. Any missed meeting will be assumed to be unexcused unless the student talks to a coach/mentor. Under some circumstances, at the coaches discretion, an unexcused absence from a required meeting may be made up by attendance at an optional meeting. Chronic or significant **tardiness** may jeopardize the student's attendance record.

Academic Expectations

Robotics is a large time commitment, but academics require time as well. Members are expected to maintain focus on schoolwork before extracurricular activities. Team members should maintain a minimum C grade average and no N in any classes. If a student is struggling or falling behind in a class, they should not miss school to attend a competition. It is a goal of the robotics team to help each other, on the team and in school.

Varsity Lettering Criteria and Competition Eligibility Requirements

Earning a varsity letter for any sport/activity is an honor which recognizes the student's hard work and achievement. Lettering criteria are set to recognize a level of commitment to the team and an achievement level proportional to other varsity activities. First-year team members typically find there is a tough learning curve, and may not be at a point to make significant contributions until nearer to the end of the season. Therefore, team members should not necessarily expect that they will be able to earn a letter in their first year.

Lettering and competition eligibility criteria will be applied equally to all students. Students who would like special consideration for any criteria (ie, attendance conflicts due to other commitments, special learning needs, academic exceptions, etc.) must submit a request in writing. The request must specifically detail the nature of the exception being requested and suggest suitable replacement

criteria relative to the student’s needs. In extreme circumstances, such as family emergency or illness, exceptions may be made at the discretion of the coaches. Students will need to fill out and submit a form in order to be considered for a varsity letter.

It is expected that all team members will be committed and engaged enough to warrant attending the team competitions. However, there are minimum requirements for eligibility to attend out-of-town competitions.

Lettering criteria and competition eligibility requirements are divided into 5 categories:

1. Attendance
2. Academics
3. Gracious Professionalism
4. Outreach / Fundraising
5. Contribution

	Out-of-town Competition	Varsity Letter
Attendance	70% (and no more than 3 unexcused absences)	85% (and no more than 2 unexcused absences)
Academics	1) Must not be failing in the same class for two consecutive weeks prior to the competition	1) Must earn passing grades on all report cards issued during robotics season. 2) Must not be failing any class for four or more weeks throughout the season
Gracious Professionalism	No more than 2 strikes	No strikes
Outreach / Fundraising	2 hours	4 hours
Contribution	1 point	4 points

Lettering Criteria:

1) Attend a minimum of 85% of scheduled full-team meetings. When a student is unable to attend a full-team meeting, they must let a team captain know via slack or email prior to the meeting. A student who has missed a meeting is responsible for finding out the material that was missed. Two or more unexcused absences (where no communication was received a day prior to the meeting) will make a student ineligible for a letter.

2) Attend all regional, state, and national competitions which the team attends, and fully participate in assigned roles (ie, drive team, scouting, pit crew, spirit). Exceptions may be considered for extenuating circumstances as they arise. Please discuss any conflicts with the team captains as soon as possible.

Gracious Professionalism and Contribution

These two will be evaluated by the coaches and team mentors for each student.

What is Gracious Professionalism (GP)?

One of the primary tenets of FIRST is Gracious Professionalism. GP is defined as “a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.” This is practiced by all FIRST robotics teams to help better a team’s sense of community and prepare for tough competition. A GP “strike” is an occasion when a team member is confronted for behavior which is contrary to the principles of gracious professionalism. Examples include: inappropriate language, bullying, disrespectful or disparaging comments about someone, any behavior that makes someone feel uncomfortable or unwelcome at a meeting, distracting others during a meeting, playing games on a phone or other device or spending any significant amount of time attending to one’s phone or other device (not robotics related), etc. GP strikes are expected to be extremely rare. If there are multiple or repeated strikes, it is likely that the student will be removed from the team.

Contribution: Contribution points are earned for any exceptional effort which contributes to the strength of the team and helps to achieve a team goal. This refers to personal and individual work on some aspect of robotics, above and beyond what is typical in a general meeting. Some examples are:

- Taking the lead on planning and building a prototype mechanism
- Spending some time documenting some aspect of the team’s work
- Writing a specific piece of robot code that achieves a stated goal of the programming team (the size of the code is not important...but completed and tested code is...however, even code that doesn’t work, provided that something was learned in the process does count.)
- Writing an email to a potential sponsor, and having it reviewed by a mentor prior to sending
- Making arrangements for an outreach event
- Doing some research on some topic that would help the team to achieve our goals, and presenting the findings of your research to the team
- Creating a cad model of a part of our robot (whether actually used or not)

Contribution towards out-of-town travel will be evaluated by observation from coaches, mentors and student leaders. Contribution points that will be applied to varsity qualification must be documented by submitting Contribution Point Forms that have been signed by a mentor to the coach at the time of application for a varsity letter. The Contribution Point Forms must be filled out and signed within (1) week of the task or activity. The coach and mentors will not sign forms for activities that they did not witness or do not remember or for which there is no documentation.

Behavioral Expectations

Behavior at meetings

Team members are expected to be mature as well as respectful, and to actively contribute to the team's goals. Disruptive behavior such as distracting others, and talking while someone is presenting is not acceptable. Due to the nature of our program, students must be able to work productively and independently, often with open-ended instructions. Students are expected to ask for help when needed and to proactively seek out productive activities. Playing games on computers, tablets, or phones is not permitted and will not be tolerated. After appropriate warning, students who are not being productive or who are distracting to others will be sent home. Continued offenses may lead to suspension from the team.

Cleanup is an important part of every meeting. It is not fair to remaining students if some students avoid cleanup by leaving early. Students will not be dismissed from team meeting sessions until clean-up has been completed and approved by the mentors. Captains and mentors will do their best to remind the team to clean up early, but please be advised students may be held a few minutes after the posted meeting end time if clean-up has not been satisfactorily completed.

We reserve the right to remove anyone from the team who behaves in a dangerous, disrespectful or distracting manner.

Equipment Usage and Safety

The team has made a significant financial investment in tools, robot materials, and other equipment. It is everyone's responsibility to protect this investment. All tools and equipment are the property of the Robotics Team or Central High School, and must be used for robotics activities only. Expensive electronics equipment can become a "paperweight" with one backwards wire, and valuable time can be lost when a specialty tool is damaged or lost. Team members are expected to use caution and ask for assistance when unsure how to properly use a tool or piece of equipment. Students may be held financially responsible for damage resulting from careless or intentional misuse.

The team takes safety very seriously. Students are required to obtain proper training before using power tools and must adhere to safety rules at all times. Safety glasses and closed-toe shoes must be worn when working with tools or if a student is near the robot while it's on/being worked on or if there are tools in use. Loose clothing and jewelry should be avoided and long hair should be tied back. Failure to follow safe practices may result in immediate dismissal from the build session or event.

Local Transportation

Students are responsible for their own transportation to and from meetings. The team will try to organize carpools to local events, but this is dependent on parent support and may not always be an

option. Parental consent is required for rides arranged with other parents. Coaches, mentors and other team members are not able to provide rides. Mentors who are also parents of team members may give rides to other students as long as that student's parent(s) is/are aware and approve.

Events and Competitions

Students are generally responsible for their own food at local events, although the team may at times coordinate group food purchases. This information will be sent out before the event.

For our out of town event(s), the team has previously covered the cost of travel, lodging and most meals. Depending on funding, the team will continue to do this, but this is subject to change. Team policy states that no student, who otherwise qualifies to travel, will be excluded from participating for financial reasons.

Parental Information

Parents should stay up-to-date on team requirements and announcements and ensure that their child has met the requirements for participation. The primary methods of communication for parents are email and the team website. If you are not receiving emails, please notify a coach so we can correct that.

As parents, you know your child's needs best. If your child could benefit from specific accommodations to get the most out of the program, please reach out to the coaches. Coaches and mentors want to work with you to make sure your child has the best experience possible.

Parents are encouraged to get involved in team activities, both to support your student's commitment as well as to help achieve the goals of the team. The MinuteBot Boosters was formed as a booster club to provide a structure for parent volunteers. Opportunities for volunteering include, but are not limited to:

- Participating in the MinuteBots Booster Club
- Providing food/meals during the long build season meetings
- Driving carpools or chaperoning events
- Coordinating carpools and travel
- Organizing the end-of-year banquet
- Running to the hardware store to get parts or supplies during build sessions
- Building game pieces and field elements
- Helping run team events
- Mentoring
- Assisting with fundraisers
- Providing supervision during build sessions

Please contact the MinuteBot Boosters for ways you can support the team.

Some companies offer donations when employees volunteer their time with a nonprofit or will match

an employee's donation. Check to see if this is an opportunity for you. The team is always interested in bringing new sponsors to the program. If you think your business might be interested in sponsoring us (whether financially or through donation of goods and services), please work with the Business Team to help us reach out to them. Central Robotics (through MinuteBot Boosters is a registered 501(c)(3) nonprofit organization. Donations to the team are tax-deductible, provided the donor does not receive a return benefit.

Team Finances

Overview

The cost of running our robotics program is significant and our annual budget can exceed \$40,000 or over \$1000 / student during a successful year including Championship travel.

Grants and Donations

Central High School and the district provide some support, but the majority of the financial support comes from generous grants from businesses, donations from many individuals, and through student fundraising. Our business team and student leadership contribute significant effort to securing grants and running other fundraising activities. The MinuteBots Boosters organization manages the team's finances and is a registered 501.c.3, non-profit corporation.

Participation Fee

In order to ensure that our program is available to all students at Central, Central Robotics has no participation fee for students for any of its program offerings. In lieu of a participation fee, we ask that students and families who are able make a donation to the MinuteBots Boosters in support of the team. An annual donation of \$50 / student is appreciated, but please make a decision based on your situation. There are also numerous non-financial ways to help support the team.

FIRST Registration

Registration with FIRST Youth Registration System is **MANDATORY**. It is FIRST's way of collecting contact information and obtaining consent & release forms for participation. A parent or guardian and every student must **each** register online and parents must complete a Consent and Release form for students to participate. Registration and consent & release forms must be completed by Thursday, November 17, 2022. Our team numbers are:

FIRST Robotics Competition (FRC) Team Number: **4536**

FIRST Tech Challenge (FTC) Team Number: **16806**

The youth registration system can be found at:

<https://www.firstinspires.org/resource-library/youth-team-member-consent-and-release-form>

Applying to Join the MinuteBots

Students will be required to apply to join the team. The form will be due by (need date). Before this date students will not have any attendance or participation requirements. This is to allow for students who are interested in any aspect of the robotics team whether it's building, programming, or business (managing social media, reaching out to other teams ect.) to get an idea of what being on the team will be like.

The link to the Team Application Form can be found at:

<https://forms.gle/LUhDrdFLgxX8yAut9>

Coaches, Student Leadership, Mentors, Volunteers

Coaches, mentors, student leaders, and volunteers are instrumental in delivering a successful program.

Teams' Leadership

John Lavik, Coach and Lead Mentor
Jim Nichols, Coach and Lead Mentor
Jay Paska, FTC Coach

2022-2023 Student Leadership

Hadley Ninow, Team Co-Captain
Quinn Skelton, Team Co-Captain
Karina Hydrie, Business Captain
Gavriel Pappas, Programming Captain
Lowell Stephani, Build Captain
Twyla Paska, FTC Captain

Mentors

Dan Tuma
Daniel Ninow
Dennis Melamed
Mariel Jones
Mike Yarnold
Jay Paska

MinuteBots Boosters Officers

Yelena Hydrie, President

John Lavik, Vice Chair

Richard Stephani, Co-Treasurer

Tonia Stephani, Co-Treasurer

Jim Nichols, Member

Resources

MinuteBots Slack Channel

(Our main communications platform)

[Minutebots4536.slack.com](https://minutebots4536.slack.com)

Team Calendar

(Consists of important dates and meeting schedules)

<https://calendar.google.com/calendar?cid=a2cyZjB2M2MxMTJhbWpvcG4zdnA5b2Q4cmNAZ3JvdXAuY2FsZW5kYXluZ29vZ2xlLmNvbQ>

Team Website

(Learn more about the MinuteBots!)

www.minutebots.org

FIRST Website

(Learn more about FIRST!)

www.firstinspires.org

Blue Alliance Website

(Watch competitions from previous seasons)

<https://www.thebluealliance.com>

Chief Delphi

(A discussion forum for all things related to FIRST robotics)

<https://www.chiefdelphi.com/>

Twitch.tv

(Livestreams of official FIRST events)

<https://www.twitch.tv/firstinspires>

Statement of Commitment to Team Values

Please Print off this Sheet, sign and turn in to one of the team captains.

I, _____ (student name), state that I have read this handbook and agree to abide by the guidelines for behavior and commitment to the team stated within the handbook.

Signature: _____

Date: _____

I, _____ (parent name), state that I have read this handbook and understand that my student is expected to comply with the guidelines for behavior and commitment to the team stated within the handbook.

Signature: _____

Date: _____