

# Team 6504: The Falls Church JagWires

*Falls Church High School*

Member Handbook



# Introduction

To whomever is reading this, I, Anhtuan Nguyen, the original founder of Team 6504: Jag-Wires, would like to personally welcome you to the Falls Church Robotics Team. Whether you are a freshman walking into the school for the first time, or a parent looking to help coach our team, we look forward to your time on the team. This handbook contains key information about the clubs standards and activities, such as key policies, rules, dates, volunteer activities and competition information.

Though this team is very open in its activities, the success of the team depends on everyone's - and that includes YOUR - cooperation and participation. We expect all members to respect other members, staff, mentors, volunteers, and other guidelines. The members of the team have worked hard over the past 4 years in order to bring the club to where it is today; and we look forwards to your time with us, which will undoubtedly propel the club into a brighter future. We, the Falls Church Robotics Team, hope to endow every student it can a passion for learning and expanding your horizons, even beyond the team itself, and into college, the workforce, and the future.

# Mission Statement

*“Our goal is not to simply teach the next generation of brilliant engineers and scientists; but to inspire and motivate them, so they can forge their own path into the future.”*

# About

Team 6504 gives students a unique opportunity to dive headfirst into the incredibly diverse fields of robotics, engineering, programming, design, and modelling, as well as other non-robotics skills, such as web design, communications, advertising, and media relations. Students will gain highly useful technical skillsets, such as mechanical, design, or programming. However, most importantly, they will master more core skills, such as leadership, team building, project and time management, marketing, etc. By partnering with companies such as AFCEA, and SySTEMic Solutions, we motivate and inspire students to passionately pursue education and careers in STEM fields.

## **What we do**

The Falls Church Robotics Team competes in three large internationally recognized competitions. All of these competitions are based around the same principle; challenging students to design, build, and program robots in order to compete against other teams from around the world in competitive games. However, as well as compete, we work on many other technical, fundraising, or other projects that may interest people who are less keen on working with robotics.

### **The VEX Robotics Competition**

The VEX Robotics Competition is one of the first competitions new inductees will compete in. Created by the VEX Foundation, the game is played in a 2v2 format with robots usually with a maximum volume of 18"x18"x18". While the game is revealed in late April, teams will begin construction of their robots in early October. Students are provided a kit, with an explicit ban on using non-VEX materials, as they are banned from competitive play. This limited catalogue of parts makes *VEX much easier for students to get into*, allowing less experienced members to get a better understanding of basic concepts before graduating to higher competitive play.

### **The FIRST Tech Challenge (FTC)**

The FIRST Tech Challenge is the other competition, new inductees will compete in. Created by the organization, FIRST (For Inspiration and Recognition of Science and Technology), the game is played in a 2v2 format with robots usually with a maximum volume of 18"x18"x18". The FIRST Tech Challenge is revealed on September 9th, and teams will begin construction of their robots in early October. Students are provided a kit, however, unlike VEX, the FIRST Tech Challenge welcomes and encourages students to use any parts they would like, from 3-D Printed parts to scrap metal/wood. This creates a higher difficulty curve, and *members with some experience or wish to challenge themselves* may enjoy competing in the FIRST Tech Challenge.

### **The FIRST Robotics Competition (FRC)**

The FIRST Robotics competition is the largest of the three competitions that we compete in. Founded in 1992, by American engineers, Dean Kamen and Woodie Flowers, the founders of FIRST, the FIRST Robotics Challenge(FRC) challenges students to build industrial scale robots in 6 weeks in order to compete against international teams from around the world. FRC Build season begins on January 6th each year, at the FRC Game Reveal Kick Off followed by six hectic and action-filled weeks (and weekends). Teams work with industrial power tools, and advanced Computer Aided Design in order to build a robot from scratch,

using any parts and materials they choose. After this, the team travels to various competitions from around the state, and possibly the country, to compete. FRC is the only competition that the entire team will compete in together as one. Though this competition is by far the most time, energy, and resource intensive of the 3, it is by far the most rewarding.

### **Falls Church Annual Lego Challenge**

We also try to spread our interest in STEM to other students. Each year we host the FCLC, a Lego based competition aimed at introducing elementary and middle school students to the world of STEM. Challenging students with work with LEGO Mindstorms Kits, students are challenged to build a robot in 4 weeks in order to compete against their fellow classmates in a 2v2 style competition.

### **Art/Photography/Advertising**

Besides competition, we also have our own advertising and photography division. They say a picture is worth a thousand words, so when it comes to keeping a journal, having a few pictures can't hurt. By having several photographers and artists on our team, we can ensure that precious moments won't be lost to time. We create our own promotional materials from scratch using a variety of art and video programs. Students who are less interested in the engineering aspect of our team may find the advertising and media relations to be much more captivating. Students will use cameras, art, and video making programs in order to film and photograph meetings and important events.

### **Web Development/Team Media**

We have many forms of outreach for our team, including a website, a Twitter, and a YouTube channel. However, as anyone who runs social media page knows, those accounts must be maintained, updated, and constantly active. Students who are more interested in media relations may find our Web Dev and Team Media Division interesting. Students will work with the Art Team in order to maintain our social media, and work on updating our website, using HTML and CSS programming.

### **Finance/Media Relations**

Our club is completely student and sponsor funded. We do not receive any funding from the school or district, which mean we are highly independent, doing as we please, when we want to. However, with that freedom comes the responsibility of raising the money to do what we want. Students will work on a budget, oversee fundraising events, work with staff on distribution of money, and work on reports to sponsors to keep them informed of what their money is used for and to keep good relations with them.

# Eligibility for Membership

While we strive to make STEM Education as accessible to the general public as possible, there are certain requirements that must be fulfilled and maintained in order to become and stay a member of the team.

- Turn in the completed and signed contract at the end of the book
- Achieve and maintain a GPA above 3.0
- Comply with the rules set forth in this handbook
- Participate in team activities throughout the school year.
- Attend all mandatory meetings and events (unless certain arrangements are met)
- Return the student due sheet by September 21st.

# Member Obligations and Opportunities

## Team Dues/Fees

While our team does its best to keep fees for its members at a minimum, we DO have several membership dues in order to pay for t-shirts and other fees. The membership fee is \$20 per student and covers a team T-Shirt and dues for the year. This fee is due by October 1st if members plan to stay.

## Meetings

Our meetings are on Tuesdays through Thursdays during most of the school year, in Mr Bertha's room; Room 136. We meet immediately after school from 3:00 PM to 4:30, though we occasionally (but not frequently) ask that people stay until 5:00. Students are encouraged to come as many times per week as possible, however, as that is highly demanding, we only require once-per-week attendance. If there is ever a week that attendance will not be possible, please email the team in advance.

## Mandatory Meetings/Events

Mandatory Dates are highly important events that are imperative for all members if they want to compete. Unless an emergency arises, we expect all members to attend mandatory events.

- Interest/First Day Meeting\*
- FRC Kickoff - (January 6th)
- FRC Competition(s)
- Fundraising Events
- Staff Meetings\* - The first wednesday every month

\* : Only Applies to staff members

# Communication

## Team Website/Team Calendar:

The Team website is located at [fallschurchrobotics.com](http://fallschurchrobotics.com). This website contains documents, such as electronic copies of the Member's Handbook, the Student Transportation Liability Sheet, Safety Contract, as well as other educational materials. In addition, our website will have an accurate up to date calendar with activities for the next month.

## Email

All members are required to have an active email address registered with the team. They must actively check it weekly. If students have questions, need to report an absence, or need to talk to staff members, please email the team.

Team Email: [fallschurhrobotics@gmail.com](mailto:fallschurhrobotics@gmail.com)

Anhtuan Nguyen (Senior President): [atunanguyen@gmail.com](mailto:atunanguyen@gmail.com)

Sam Morstein (Junior President): [sammorstein@gmail.com](mailto:sammorstein@gmail.com)

Ralph Albrecht (Head Coach): [rpalbrecht@atfirm.com](mailto:rpalbrecht@atfirm.com)

John Bertha (Teacher Sponsor/Coach): [jcbertha@fcps.edu](mailto:jcbertha@fcps.edu)

Alexander Savinski (Modeling Captain): [alexander.savinski@gmail.com](mailto:alexander.savinski@gmail.com)

Andre Padiovani (Build Captain):: [ampadovani@msn.com](mailto:ampadovani@msn.com)

Daniel Lower-Basch (Code Captain): [daniel.lowerbasch@gmail.com](mailto:daniel.lowerbasch@gmail.com)

## Discord

Our team uses Discord for much our informal communication as well as a social platform. Announcements will be send through Discord first, before Remind101 or Email. Though it is not required, it is highly encouraged to make a free Discord account.

Discord: <https://discord.gg/nUPSPjW>

## Remind 101

Our team also uses Remind 101 for announcements and alerts that will be sent out via text. Again, though it is not required, it is highly encouraged to sign up for alerts from Remind 101  
Remind 101: Text @fcrteam to 81010 to join

# General Information

## Behavior

While we do understand this is an extracurricular activity, and allow more freedom than the normal school day, we do expect a certain level of respectful behavior in the lab. All students must obey safety and other behavioral rules.

- Respect all other students as well as their ideas, opinions, and creations
- No member is allowed to work without a mentor or staff member on site.
- If a student must leave early, they must clean for 10 minutes before they may leave and a notify staff or a mentor before they may leave
- Students must notify mentors and staff when an object or tool breaks.
- Horseplay/Roughhousing is prohibited in the lab
- Use your time constructively during meetings
- Please refrain from using your phone during meetings unless told otherwise ok
- Behave maturely and professionally at all times
- Please respect all staff and their instructions
- Refrain from foul and hateful language at all times

In addition, students need to continue to obey all school policies, as violation of school rules will be considered a team offense as well. Students who repeatedly violate these rules will face disciplinary action up to expulsion from the team.

## Interventions and Consequences

As a team, we expect a high level of discipline. Those who violate the rules established by the handbook and the SS&R, will face disciplinary action. These interventions can include reprimands, contacting parents, school intervention, and team expulsion.

## Safety Rules

Safety is our number 1 priority. To keep all members safe at all time, certain rules must be obeyed without question. Students who repeatedly violate these rules will face disciplinary action up to expulsion from the team.

- No roughhousing/horseplay is allowed within the lab.
- Please wear safety equipment (i.e. Goggles) when working in the lab.
- Appropriate dress is required in the lab
- Please eat or drink in designated parts of the lab or outside the classroom
- Never work unsupervised in the lab; a mentor/staff member must be present

- Keep your area clean when and after working; put everything back when finished
- Avoid touching eyes, nose, or mouth when in the lab
- Notify staff/mentors if there is a hazard
- Report all injuries (no matter how small) to the safety officer
- Be careful when handling sharp, hot, electrically charged, or rapidly moving objects/tools
- Know the lab drills for fire drills and other lab interruptions
- Inform the safety officer of any medical conditions that may affect your ability to safely work in the lab.
- Students must be team certified before using certain tools

### **Submissions and Publications**

To protect the team's image, all documents, pictures, videos, and other media has to be approved by the staff before release. This includes award submissions, publicity materials, news articles, and posts to social media.

### **Confidentiality**

Please do not post any images, videos, ideas, design, or documents to the internet or anyone not a member of the Falls Church Robotics Team without prior explicit approval from leadership.

## **Team Leadership**

### **Co-Presidents: Anhtuan Nguyen and Sam Morstein**

The Presidents are responsible for making final executive decisions for projects, keeping a schedule of activities going on, signing up for competitions, ordering parts, planning and executing activities.

### **Secretary: Cole Wendrowski**

The Secretary is in charge of administering paperwork and executing projects, and works with the other staff to plan events and travelling plans. Also, Cole oversees much of the FRC Robotics Season.

### **Treasurer: Jacob Butler**

The Treasurer is responsible for creating fundraising ideas, setting up the events with assistance from the presidents, applying for grants and funds, keeping a tab on finances, including keeping an up-to-date budget. He/She must understand the costs of competition, registration fees, and come up with solutions to work around these problems



**Communications Advisor: Rojo Ramiandrisoa**

The Communicator is responsible for keeping track of attendance. They are responsible for sending (weekly) E-Mails to parents and students. The communicator will be in charge of also managing the Discord and Remind101 and update everyone of activities.

**Safety Captain: Jason Caceres**

The Safety Captain is responsible for teaching safe use of equipment and tools. They must keep track of injuries, no matter how small, and log all injuries. They must maintain Standards Of Safety (SOS)

**Head of Programming: Daniel Lower-Basch**

Head of Programming is in charge of planning lessons for programming. They are in charge of teaching new members interested in programming, basic programming of the robot in C++ and Java.

**Head of Fabrication: Andre Padovani**

Head of Fabrication is in charge of planning lessons for building. They are in charge of teaching new members basic construction, how to use tools, and how to build robots overall.

**Head of Modeling: Alexander Savinski**

Head of Modelling is in charge of planning lessons for 3D CAD Design. They are in charge of teaching new members interested in planning and designing the robot basics of 3D modelling, how to use AutoCAD, etc.

# MEMBER SIGNATURE SHEET

Please sign and return this form to your child's school by September 20, 2017. By signing and returning this page, you acknowledge that you have received the Falls Church Robotics Team's Member Handbook. This booklet is required by school policy and contains the following: Standards of Member Conduct, Interventions, and Consequences, Standards of Conduct for Students on Travel, Parental Responsibility, Involvement Requirements, and Compulsory Meeting Attendance Requirements.

The Rules and Policies set forth in this Handbook are binding, and must be followed by all team members at all times. All members must acknowledge that authority of the Handbook by signing the contract below. By signing this, the member acknowledges the risks and responsibilities of membership on the team, and acknowledges that:

- He/She has read the member handbook, and agrees to comply with the policies outlined within
- He/She understands this program requires attendance at certain mandatory events unless staff is notified 1 week prior to the event.
- The equipment used by the team can cause serious harm and injury if used improperly. He/she understands that they may not use certain tools until they are team certified, and will use the tools safely, and only under adult supervision.
- He/She consents to being photographed/filmed and allows their name, photographs and comment to appear in media related to Team 6504
- I understand violation is punishable up to and including dismissal from the team

I \_\_\_\_\_ agree to follow all of the standards of the 2017-2018 Member Handbook. I understand that if I do not follow these regulations, I may be asked to leave the workshop for my own safety, and will promptly do so until permitted to re-enter the workshop.

I \_\_\_\_\_ also agree if a mentor, captain, coach, or other members instruct me to discontinue an unsafe act, I will promptly comply with their request. Ignoring instructions from these instructors may lead to being expelled from the workshop until permitted to re-enter. Repeated violations may lead to my permanent expulsion from the club.

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Student's Name (Print)

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Date

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Student's Signature

# PARENT/GUARDIAN SIGNATURE SHEET

I \_\_\_\_\_ understand the standards of the 2017-2018 Member Handbook. I understand that risks of allowing my child to work in the workshop and give consent for my child to work in close proximity to large industrial machines if certain safety requirements have been met. I understand that there is a possibility of injury if my child does not comply with safety instructions from mentors, captains, and coaches. I understand that any injuries that happen to my child due to their refusal to follow safety guidelines is not the responsibility of the Falls Church Robotics Club and allow my child to work in the laboratory. I also understand that there are out-of-school activities, and give consent for my child to attend these events for club purposes

(Optional)

I \_\_\_\_\_ give consent for my child to work with large industrial machines. I understand that improper use of the machines as well as ignoring safety instructions may lead to my child being injured. I understand that any injuries that happen to my child due to their refusal to follow safety guidelines is not the responsibility of the Falls Church Robotics Club and allow my child to work with heavy machinery for club purposes.

By signing this, the parent/guardian acknowledges the risks and responsibilities of membership on the team, and releases the club of responsibility from any injury caused by misconduct on the student's part; including violation of the safety code, improper behavior, or other violations of the team's Rules of Conduct.

\_\_\_\_\_  
Parent or Guardian's Name (Printed)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent/Guardian Signature

# Transportation Liability Contract

	Yes	No
1) My child has permission to operate a family owned vehicle to and from any school sponsored activity within Fairfax County.		
2) My child may transport other students to and/or from any school sponsored activity inside Fairfax County.		
3) My child has permission to operate a family owned vehicle to and from any school sponsored activity.		
4) My child may transport other students to and/or from any school sponsored activity.		
5) My child may ride in a privately owned vehicle operated by a mentor/member to and/or from any school sponsored activity.		
6) I, as a parent/guardian am willing to drive my son/daughter AND OTHER STUDENTS to a school sponsored activity when my child and other students are participating in that activity.		

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Student's Signature

Date

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Parent's/Guardian's Signature

Date