



Peachtree Ridge Robotics Team Handbook

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WELCOME

Congratulations on being selected to join the Peachtree Ridge Robotics Club. We think you will find your experiences very rewarding and enjoyable. This guide is intended to give you an understanding of the program and the expectations of team members, faculty advisors, and mentors. In the following pages you will find information relating to our history, rules, guidelines, organization at competition, travel and many other aspects of our team.

Please review all the information very carefully. If you have any other questions that this guide has not covered, or if there are questions regarding any topic, do not hesitate to ask a faculty member or mentor.

You are encouraged to share this manual with your parents as they are also a key component to our success, and refer to it for future reference.

TEAM HISTORY

In August 2003, Peachtree Ridge High school opened its doors to 1,900 students. In this first year of the school's existence a small group of dedicated students came together to form Team 1261, known at the time by current team members as 'B3'. The Team has a wiki page¹ developed in 2007 detailing team history that contains much more detail.

The task of forming a robotics team is not as easy as one might think, yet we managed to accomplish most of the administrative work in the first few months of school in order to compete in the FIRST² Robotics Competition during our first organized year. Not only had no one on the team ever built a robot, but in order to participate in the FIRST 2004 competition, the team needed to raise \$5,000 for registration fees. Nevertheless, thanks to the sponsors, work of dedicated teachers, and mentors, the team managed to pull off the amazing feat of competing in the Peachtree Regional in the school's first year of existence.

No one knew what to expect going into our first competition yet our robot performed quite well. Our robot survived the rigors of competition while managing to provide all team members with a few memorable moments.

This, however, was just the beginning. Having a year of experience under our belts and having gotten our feet wet, we waited for the 2005 FIRST competition with anticipation as everyone wanted to show the world how good we really could be. In 2005 we were picked as an alliance partner with Team 801³ and Team 281⁴ in the quarter finals. We went 6-0 in throughout the quarterfinal, semifinals and finals to take the Peachtree Regional competition. The experience was unbelievable.

In 2006, we took our team to the next level in competition and furthering the goals of FIRST. We share the vision of our school to strive for excellence. Our 2006 Robot out performed all of the others at the Peachtree Regional and exceeded our dreams by being the number 1 seed going into the quarter finals. We went on to win the Peachtree Regional for the second year in a row. We competed for the Chairman's Award and competed for and won the Underwriters Laboratory Safety Award. We received Delphi's⁵ Designing Tomorrow's Technology Award for our Robots unique Omni drive design. It was an amazing year.

¹ http://wiki.prhsrobotics.com/index.php?title=Main_Page

² FIRST <https://www.firstinspires.org/about/vision-and-mission>

³ Team 801 <http://www.team801.com/>

⁴ Team 281 <http://entech281.org/>

⁵ Delphi <https://www.delphi.com/>

A summary of our success in the next several years is highlighted below:

- 2007 – attended Peachtree Regional and won Innovation in Control for modded guitar hero controller, unobtainium material was introduced.
- 2008 – Peachtree Regional, Palmetto Regional, Champs, Creativity Award at Peachtree, participated in FTC
- 2010 – Champs, back-up for Galileo Division World Championship, student awarded Dean's List
- 2011 – started hosting VEX qualifier, Engineering Excellence Award at Peachtree Regional
- 2012 – won Peachtree Regional & Creativity Award, Qualified for World Championship
- 2013 – Judge's award at Peachtree Regional
- 2014 – won Palmetto Regional, Genesis named robot, built, and still in use today for demonstrations, Industrial Design Award, Qualified for World Championship
- 2015 – Creativity Award at Peachtree Regional
- 2016 – Regional to District model, won Albany and Kennesaw District competitions, Chairman's Award Winner Albany and runner up at State Event, attended World Championship, were semi-finalists of our division.

Our Mission

The Peachtree Ridge High School Robotics Club, Robo Lions, exists to inspire students to appreciate and pursue an interest in science and technology. The partnership between students and mentors allows the team to share and apply knowledge of engineering, business, and leadership skills through fun and hands-on experiences. As a team, members work toward a common goal of designing, building, marketing, and operating a competitive robot in a business-like environment while supporting the ideals of FIRST.

Our Vision

We are a student-inspired, mentor-advised organization. This is accomplished through our team structure and organization. Our veteran students are placed in roles of leadership where they are responsible for managing meetings, mentoring new students, planning fundraisers and more. Every student and mentor plays an essential role in the success of our organization.

We encourage student understanding and skill development by providing real world extensions to school related curriculum. We continue to develop and implement activities and projects that align with the standards and concepts of FIRST.

We support the growth of STEM⁶ in our cluster and community. We work with schools to start new robotics teams and work with schools with existing or established teams to improve their robotics programs.

We participate in STEM activities throughout the school year in our school and community. We conduct fundraising events to fund team events and expenses. Our students will begin engineering activities and development of high tech robot components, internship in different companies, and STEM day activities.

⁶ STEM is a term that refers to the academic disciplines of science, technology, engineering and mathematics.

BEHAVIORAL EXPECTATIONS

The Peachtree Ridge Robotics Team is a unique group of students and adults; both groups are defined as members on this team. We all rely on each other for the success of the group. Everyone is expected to bring the best of their abilities and talents to the group. The competition each year is both expensive and time consuming and it is expected that all involved will behave as adults and motivated young adults with the greatest regard for others and integrity.

Each member is expected to act with “Gracious Professionalism^{®7}” at all times. Gracious Professionalism[®] refers to a respect for all people and belongings, being on your best behavior at all times, showing good sportsmanship, having a positive attitude, speaking with a clean vocabulary, and being friendly and polite at all times to all persons.

A member’s behavior is under scrutiny, at all times. It is very important that you understand that you represent Peachtree Ridge High School, our sponsors and the Robotics Team.

Student behavior in school and specifically in the classroom is a message to all regarding the caliber of students on our team. You are looked upon as role models, and examples of the best students our school has to offer.

Members are expected to at all times be polite and respectful to all faculty and staff members and refrain from activities that are considered disruptive. Any team member receiving disciplinary action of any type is subject to review by the mentors.

If you do not think you should do it, then probably you should not.

At competitions, all eyes are on team members every minute. Your behavior is a direct reflection on your character and on our team. A judge or member of another team may over hear what you say to one another and how you say it.

Students are requested to cooperate at all times. This is to mean that if a mentor requests you to do something you will comply with the best of your ability. Ignoring the directions or requests of a mentor is not in the team’s best interest. If you feel a request is out of order, you are encouraged to complete the task then speak to the mentors at a more appropriate time.

⁷ Registered trademark of FIRST, <https://www.firstinspires.org/>

If a problem arises with the behavior of a student, the PRHS⁸ and GCPS⁹ discipline policies will be enforced. The teachers and mentors have the option to discipline a team member as necessary for safety and the overall good of the team; discipline may include probation, suspension, and dismissal of a member from our team.

The parents of the student(s) involved will be informed of any concerns and/or disciplinary actions.

DEMONSTRATION OF APPROPRIATE BEHAVIOR

- a. **Consistent Demonstration of Good Judgment and Positive Behavior:** Each member is an ambassador of our team. Members need to be role models for other students and adults to emulate and respect.
- b. **Ability to Commit to a Project:** Starting a project and following it through to the end is critical to team performance. Members need to dedicate themselves and not to get sidetracked or discouraged. Your word is very important. **Do not take on a responsibility you cannot perform and ask for help if you are having problems with a project. Communication between mentors and students is key to the success of a project and mentors are readily available to support your efforts.**
- c. **Ability to Work as a Team Member and as a Guided Team Member:** Being a team player, requires initiative, willingness to take responsibility for a task, and the character to seek out guidance as needed. As a TEAM, there is seldom a task or responsibility that it is expected that anyone would work alone. In order to remain a TEAM, all members need to continually resolve misunderstandings and differences in a graciously professional manner. Honesty and Integrity are keys to success.
- d. **Good Attendance, Punctuality and Dependability:** Attendance and punctuality are indicators of a student's' commitment to their education and future. A team member needs to be available and ready to participate as much as possible. When asked to participate, establishing a record of dependability, punctuality, and task completion is essential to team organization and efficiency.

⁸ PRHS Peachtree Ridge High School
<http://www.peachtreeridge.org/site/wp-content/uploads/files/17.18Agenda.pdf>

⁹ GCPS Gwinnett County Public Schools
<http://www.gwinnett.k12.ga.us/polproc.nsf/pages/StudentConductBehaviorCode>

INAPPROPRIATE BEHAVIORS:

The team will comply with the GCPS handbook. Please refer to the GCPS handbook to see the full list of inappropriate behaviors. **Remember that you are a reflection of our team; please act accordingly at all times.**

Boyfriend or Girlfriend relationships:

In the event that a relationship develops or is ongoing, there are certain guidelines that must be adhered to at all times when engaged in team activities locally and away.

Hand holding, hugging, kissing and other expressions of affection are prohibited at all times. The couple must also travel in a group at all times. Couples may not wander off or sit alone. In other words, they should not appear as a couple but as part of the team. Common sense should prevail at all times.

SAFETY

In order to run any successful business or team, a high level of safety must be observed, practiced, and maintained. Safety procedures have been developed to ensure the safety of students, faculty advisors, mentors, and any visitors. Each member is required to review the Safety Procedures and acknowledge it.

PARTICIPATION

The Peachtree Ridge Robotics Team will have weekly meetings, at a minimum, throughout the school year, unless otherwise notified. These meetings address a wide variety of interests in technology, robotics, programming, website design, marketing, and public relations.

The FIRST Robotics Competition Team requires many hours beyond the normal school day. All team members are required to participate in after school workshops, events and other team activities.

The FRC¹⁰ *build* season begins in January, when we receive the year's challenge from FIRST during the kickoff. Members spend the next six weeks working with their chosen sub teams to design and build the competition robot. Team meetings from January-April are expected to be 2-3 evenings per week and Saturdays. Additional time may be needed.

¹⁰ FIRST Robotics Competition <https://www.firstinspires.org/robotics/frc>

During the weeks following build season the team continues to prepare for and then travels to competitions at the district and possibly the championship levels. Generally, attending district events involves travel, and in some cases, overnight stays. Attending district events is an amazing opportunity for the team to experience the success of their intense labor.

Participation in team meetings and activities is recorded for eligibility to attend competitive events during school hours. It is understandable that team members may have commitments to other extra-curricular activities, such as other teams or clubs, but robotics should be a number one priority if you wish to attend competition. Monitored attendance hours all you to qualify for lettering. Attendance of district events is determined by the student's level of participation, knowledge of the robot, and the game, in addition to coursework grades. Strong pre-season preparation makes for less stress during competition. Attendance at not only district competitions but all PRHS Robotic events will be determined by student's grades, participation level, knowledge, attitude and teamwork during the season.

Students who show dedication and take proactive roles shall be afforded roles of leadership and given more responsibility to the success of the team. The student who does not interact throughout the build season will be in jeopardy of not attending PRHS Robotics events and may not be invited back to the team the following year. If a team member wishes to assume a responsibility, they must first demonstrate that they will follow through to the end other smaller tasks and not leave any responsibilities unfinished. This is to ensure that the team works efficiently and effectively.

It is understood that our students are very busy in many other school activities. These activities are encouraged and supported by our team as long as they do not conflict with your responsibilities as a team member. It is the responsibility of the student to manage and balance all of their activities, and inform the leadership and mentors of their commitments. PRHS Robotics shall be your first priority in relationship to other clubs or activities behind your daily school work and grades.

OFFSITE MEETINGS

Some Robotics team activities are expected to be held offsite. In the case of an off site activity, transportation to this location is the responsibility of the parents. It is the policy of PRHS Robotics to have parents drive to all activities, under extreme circumstances a student may be allowed to drive themselves to an event but this must be approved prior to the event. When a student drives themselves their parents must provide a written note explaining the reason and giving their permission and releasing PRHS from

any accidents that may occur. Under no circumstance shall a student drive another student.

Remember, when we are in this situation, we are guests and need to conduct ourselves respectfully in the host facilities. Members will stay in the designated areas at all times and with your group. Respect the property of others and never enter the office spaces unless directed to do so. Remember to pick up any drink or food containers that you have used and deposit them in the proper location.

SCHOOL WORK

As a Robo Lions Team member you are held to a high standard that many other clubs or teams do not require. Our high standards and expectations are one of the strengths of our team. As a team member, you also have some of the best tutors available to you in your peers and mentors.

All team members are expected to maintain all of their grades and assignments during the entire time he or she is on the Team.

Grades:

All Team members are required to maintain a 74 or higher in all classes. Any Team member that falls behind in their studies will not be allowed to attend meetings, events, or travel with the team until their grade is 74 or higher. Grades can be checked, utilizing the official PRHS gradebook program, at any time and no later than 7 days prior to an event or competition. During the 7 days prior to and including the event or competition dates, grades, will not be checked again.

Travel Assignments:

When the team travels, you are required to follow the Peachtree Ridge High School policy for make-up work and assignments. Getting and completing these assignments in a timely manner is your responsibility. Communicate early and completely with your classroom teachers. Grades will be checked through the gradebook program only and must be at or above a 74 for each class in order for the student to participate. You will be required to complete and turn in a permission form from parents. All academic classes will be notified that you will be attending a function of PRHS Robotics and that it is an excused absence, meaning you must make up any test and work missed in a timely fashion according to PRHS rules.

E-Mail and Website

The Robotics Team uses email, our website and a smartphone text notification application to communicate all information about the team and upcoming activities. Please check your email and the website often. The website is www.prhsrobotics.com.

TEAM ORGANIZATION

The leadership of the Robotics Team will be comprised of a number of students. Our vision defines us a student-inspired, mentor advised inspired team, and this framework will apply to the leadership as well.

Leadership positions may be comprised as follows but could change as demands or student qualifications deem necessary.

Team Lead

This person will be the official spokesperson for the Robotics team. This individual will be responsible for developing meeting agendas with the faculty advisor, and mentors. The person will be responsible for conducting all general meetings. This leader will work closely with the Leadership Team, faculty advisor, and mentors and on all activities.

Assistant Team Lead

Communications Lead

Facilitation of information to the team which may include emails, social media, etc.

The following leadership position are realized as a possible need and will be assigned as needed and interest is demonstrated.

Social Media Lead

Deals with the Twitter, Instagram, etc. Deals with our marketing and things like that. Can be the Communication Lead, does not have to be. Takes pictures and updates wiki too.

Website Lead

Updates website, maybe add content, etc.

Administrative Lead

Helps with the ordering of parts and materials, also can be in charge of cataloging supply. Can also write up the bill of materials or cost accounting worksheet.

Outreach and Chairman's¹¹ Lead

During the season, additional tasks or committees might arise where we need to assign a leader.

¹¹ FIRST <https://www.firstinspires.org/resource-library/frc/submitted-awards>

FACULTY ADVISOR and COACH

The robotics club is recognized as an academic team and is considered one of the extra-curricular offerings available to students who attend Peachtree Ridge High School. All academic clubs at Peachtree Ridge High School must have a faculty advisor or advisors that sponsor the activity. One of the underlying principles of the team process is to assist in the development of leadership skills in the students who choose to participate. Therefore, the students share in the responsibilities of conducting all team operations and activities. The faculty advisor(s) serve initially as advisors to help facilitate club operations and activities. The faculty advisors are able to support any area of personal interest but they have the following specific responsibilities

- ◆ Assume full liability for the safety and welfare of the participants in the team.
- ◆ Serve as a liaison and contact person between the team and high school administration.
- ◆ Serve in a supervisory capacity and coordinate the supervision of team members while team members are meeting on and off school property, as well as attending competitions.
- ◆ Work closely with the team officers in the development of team activities and functions as well as the various committees and workgroups.
- ◆ Maintain access to a working list of team participants, mentors and parents including telephone numbers and email addresses where applicable.
- ◆ Oversee all team operations and functions.

MENTORS

Next to the students, mentors are the most important members of the team. They enable and inspire the students to do more than most people expect of high school students. They teach and guide students in all parts of the designing, building, marketing, and operations of the robot. As a team we will always welcome experienced and dedicated mentors. The mentors draw from their area of expertise to guide our students in the many aspects of the Robo Lions Robotics team. From robot engineering inspiration, web page development support, travel assistance, and financial guidance, our team is open to new mentors and with new ideas that can help us grow.

At all times, during build season and competitions we treat the mentors all the respect and appreciation possible. Since mentors bring a wealth of experience and their own personalities to the team, it is imperative that communications within the team are clear and complete so as to maintain healthy, professional relationships in the team.

Mentors have a number of important responsibilities but also reap incredible rewards by educating the workforce of our future.

- ◆ Mentors are responsible for inspiring students in science, engineering and technology and facilitating the development of these skills.
- ◆ Mentors are responsible for motivating and engaging students in meaningful activities in the designing, building, marketing, and operating of the robot.
- ◆ Mentors are responsible for creating an atmosphere of open communications where students feel free to think independently, voice their opinions, and take risks as long as they do not impose a safety hazard. Mentors are expected to be active listeners and they are expected to make sure that everyone understands what is being said or what is being decided.
- ◆ Mentors are responsible for making sure that students are completing tasks on time. This includes providing a timeline for activities and trusting students to complete tasks while holding them accountable for their assignments.
- ◆ Mentors are responsible for creating an atmosphere of trust and respect. Mentors are expected to show trust and respect to every student while fostering the same trust and respect with other mentors. Mentors are responsible for making sure that a safe environment is maintained and safety procedures are being followed. If there is an unsafe condition, mentors must step in and restore safety to the situation and communicate the situation with the faculty advisor and other mentors.
- ◆ Mentors are expected to be positive examples to the students. This includes controlling offensive language as well as following

- safety procedures such as wearing safety glasses and using power equipment properly.
- ◆ Mentors must strive to maintain a positive attitude and an optimistic outlook.
 - ◆ Mentors are expected to facilitate instruction and train the students to do as much of the work as possible. They are to coach, teach, and observe students while remaining ready to step in as needed.
 - ◆ Mentors are expected to be in complete communication with the rest of the mentoring team when there are decisions, plans, etc. No mentor should act independently from the team or other mentors in any capacity of the team.
 - ◆ Mentors are encouraged to read the FIRST Mentoring¹² Guide¹³ available at the FIRST website.

¹² FIRST <https://www.firstinspires.org/mentors-and-coaches>

¹³ FIRST

https://www.firstinspires.org/sites/default/files/uploads/resource_library/frc/game-and-season-info/2015-frc-mentoring-guide.pdf

PARENTS/GUARDIANS

- ◆ The parents/guardians of our students are an important part of the success of our team. Parents/guardians are encouraged to become team mentors. Parents/guardian do not have to be engineers to qualify to be mentors. Status as a mentor must be approved by PRRBC¹⁴ board and complete the mentor application form.
- ◆ Parents/guardians are required to provide a general contact phone number and a dependable email address so the team can provide them with information about upcoming events and team opportunities. Email is the primary and often the only method of contacting members of the team. Parents/guardians need to check their email often and communicate any correspondence with their families. If email is not available, a responsible email partner will be assigned to the family to give them a call when there is anything that they would have received through email.
- ◆ Parents or guardians are responsible for the conduct of their child. If there is a violation of the Team 1261 or the GCPS student code of conduct by their child that results in a liability, parents may be held liable. If there is a violation of the code while on an out-of-town trip, parents will be responsible for providing transportation, at their cost, to return the student home.
- ◆ Parents or guardians are encouraged to attend events and provide support for the team. These events may be competitions, team gatherings, or public events.
- ◆ Parents who are not able to fulfill a mentor role, are still expected to support their team. There are multiple less intensive opportunities that are outlined at the Parent meeting and packet for membership. The team's success requires many hours of parent involvement and we expect parents to help contribute in many ways. Some of the ways are through mentoring, financial support, help with transportation, organizing meals for the team during events etc.

¹⁴ PRRBC Peachtree Ridge Robotics Booster Club, Inc.

ANNUAL ACTIVITIES

Over the past few years our team has developed activities that have served us well as team building community awareness and fundraising activities. We plan to continue and make a tradition of the following events:

SUWANEE DAY PARADE¹⁵

Duluth Fall Festival Parade¹⁶

The Robotics team generally participates in the Suwanee Day Parade and the Duluth Fall Festival Parade to spread the word about our team, FIRST Robotics, and excellence in technology education in Suwanee and Gwinnett by decorating a float featuring our previous year's robot and walking/riding in the event.

¹⁵ <https://suwaneefest.com/>

¹⁶ <http://duluthfallfestival.org/project/festival-parade/>

ROBOTICS TEAM COMPETITION

The team participates in the FIRST Robotics PCH District events held within the State of Georgia and possible inter district events. Here is a brief description of our participation at a typical event.

The typical format could be a Friday through Sunday or Thursday through Saturday.

Day 0: Travel is involved and depending on where the event is being held will dictate the travel schedules. A small subset of team representatives, students and mentors, will be allowed to set up the pits, unpack the robot and possibly start the robot inspection process. This is generally late in the afternoon, 5:00PM and closes by 10:00PM.

Day 1: The entire team will arrive at the competition as soon as the venue is open, typically 7:30am. The schedule of events is supplied by FIRST, with opening ceremonies usually starting at 9:00am. Team members will locate a place in the stands, while the Scouting Team works on their assignments. At a district event we should expect about 12 qualification matches. These are divided up between Day 1 and Day 2. Usually the day ends at early to late evening. Sometimes specifically skilled members of the Team may be required to stay and work on the robot until the pit closes. Scouting teams will review and consolidate the data gathered during qualification matches and discuss options for team selections with mentors, and drive team.

Day 2: The entire team will arrive at the competition as soon as the venue is open, typically 7:30am. Upon entering our team again locates a place in the stands. The final qualification matches are completed by midday. The quarterfinals, semi-finals and finals occur in the afternoon.

At the conclusion of the competition there is an award ceremony where the remaining trophies are passed out. When this is complete Team members will help pack up the robot and load the PIT contents up for return to the school. This is usually completed by by late afternoon or early evening depending on travel time involved. Unloading the trailer usually occurs within 2 days of return to the school.

STATE CHAMPIONSHIP

When all the state district events have concluded, there will be a State Championship event following the similar format. The top 40 or so teams, based on ranking points and other criteria, are invited to participate.

Teams that qualify are invited to participate in the State Championship. Once the results are finalized at the State Championship the top 15-20 teams are invited to the World Championship currently held in Houston , Texas

CHAMPIONSHIP

The FIRST World Championships are held in St Louis and Houston. Our team participates in the Houston event if qualified. It is very similar to a regional event in many ways but on a larger scale. There will be teams from all over the World.

STUDENT, MENTOR, or FACULTY ADVISOR COMMITMENT

The following obligation is designed to ensure every student, mentor, and parent fully understands the expectations of the Peachtree Ridge High School Robotics Team. In consideration of the benefits received as a member of the team, I hereby agree to the following:

1. I have read and will abide by the entire student handbook and understand the expectations as a member of the team.
2. Excellent communication is an important part of our team. I will check my team email and the team calendar regularly.
3. I understand that an average of 74 or higher is required at all times in all classes.
4. I commit to following ALL team rules, including those established for travel.
5. I understand participation may involve the use of valuable equipment including power tools I commit to abide by the team rules for safety and the safety of my teammates.
6. I understand that not following safety rules may result in my dismissal from the team.
7. I understand that participation on the Peachtree Ridge Robotics team is a major commitment of time and energy.
8. I promise to dedicate myself to the team and will do my best to attend ALL team events.
9. I understand the development of a robot is a cooperative learning experience of both Mentors and students.

I have read the entire handbook and this commitment. I agree and commit to all guidelines and expectations set forth in the team handbook.

Student Signature

Date

Print Student Name _____

Parent/Guardian Signature

Date

Print Parent/Guardian Name _____

or

Mentor Signature

Date

Print Mentor Name _____

or

Faculty Signature

Date

Print Faculty Name _____