

**FIRST  
TECH  
CHALLENGE**

*2017 World Championship*

# **A - Z Guide**

## *Houston, TX*

[www.firstinspires.org](http://www.firstinspires.org)

200 BEDFORD STREET ■ MANCHESTER, NH 03101



FOR INSPIRATION & RECOGNITION OF SCIENCE & TECHNOLOGY

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Highlighted in **FIRST Tech Challenge Orange** are the topics that are considered to be the **TOP TOPICS** for teams and their guests to read. Make sure you are up to speed on everything listed in the document.



**Thank You!**

## Volunteer Thank You

Thank you for taking the time to volunteer for a *FIRST*® Tech Challenge event. *FIRST*® and *FIRST* Tech Challenge rely heavily on Volunteers to ensure events run smoothly and are a fun experience for Teams and their families, which could not happen without people like you. With over 4,600 teams competing annually, your dedication and commitment are paramount to the success of each event and the *FIRST* Tech Challenge program. Thank you for your time and effort in supporting the mission of *FIRST*!



## Sponsor Thank You

Thank you to our generous sponsors for your continued support of the *FIRST* Tech Challenge!

*FIRST*® Tech Challenge  
Season Presenting Sponsor



*FIRST*® Tech Challenge  
Official Program Sponsor



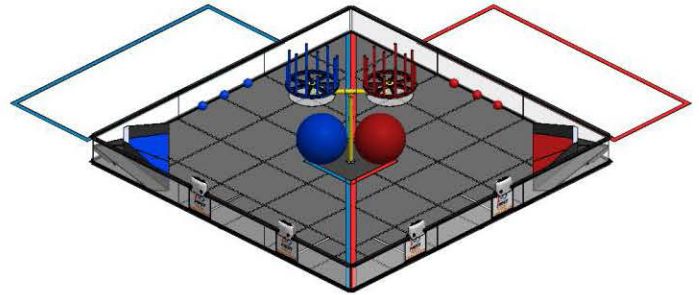
*FIRST*® Tech Challenge  
Official IoT, CAD and Collaboration  
Software Sponsor







PRESENTING SPONSOR



**The 2016-2017 Game:**

VELOCITY VORTEX<sup>SM</sup> presented by Qualcomm<sup>®</sup> is played on a 3.7m x 3.7m (12 ft. x 12 ft.) square field with approximately 0.3m (1 ft.) high walls and a soft foam mat floor. The field is divided diagonally into a “red” and a “blue” side corresponding to the two alliances. In the center of the field are two goals on a rotatable stand called the Center Vortex. Two ramps, each with a goal, called the Corner Vortex, are placed in opposite sides of the field. The Center Vortex Goals and Corner Vortexes are alliance specific. There are also four alliance neutral Beacons, two placed on each front wall next to the Corner Vortex. There are floor markings as well as Vision Targets placed on the field walls as reference points for robot navigation.

Alliance specific scoring elements for VELOCITY VORTEX<sup>SM</sup> are five small balls called Particles and one large ball called a Cap Ball per alliance. At the start of a match, each alliance has three Particles available for preloading and scoring during the Autonomous period. Each alliance can earn up to two more Particles for use during the Driver-Controlled period by claiming Beacons during the Autonomous period.

Matches have two distinct periods of play: a 30-second Autonomous period followed by a two-minute Driver-Controlled period, the last 30 seconds of the Driver-Controlled period is called the End Game which adds new scoring opportunities for robots to achieve.

**Autonomous Period:**

During the Autonomous period, robots operate using only pre-programmed instructions. Alliances earn points by: claiming Beacons, moving the Cap Ball off of the Center Vortex base onto the field floor, scoring Particles into their alliance’s Center Vortex or Corner Vortex. Alliances may also gain points by parking their robot in contact with the Center Vortex base or on the Corner Vortex.

**Driver-Controlled Period:**

During the Driver-Controlled period, alliances earn points by scoring Particles into their alliance’s Center Vortex or Corner Vortex. Robots may also claim Beacons for their alliance by triggering them to illuminate their alliance color. There is no limit to the number of times that a Beacon may be triggered. At the end of the Game, the color of the Beacon determines the alliance credited for claiming it.

**End Game:**

The final 30 seconds of the Driver-Controlled period is called the End Game. In addition to the Driver-Controlled period tasks, alliances earn points by raising the Cap Ball off the playing field floor or by capping their Center Vortex with it.

**Autonomous Period Scoring:**

- Robot Parked partially on Center Vortex base .....5 points
- Robot Parked fully on Center Vortex base ..... 10 points
- Robot Parked partially on Corner Vortex.....5 points
- Robot Parked fully on Corner Vortex..... 10 points
- Particle scored in Center Vortex..... 15 points/Particle
- Particle scored in Corner Vortex..... 5 points/Particle
- Cap Ball in contact with the floor .....5 points
- Claimed Beacon..... 30 points/Beacon  
(plus 1 extra Particle per claimed Beacon, up to 2)

**Driver-Controlled Period Scoring:**

- Particle scored in Center Vortex..... 5 points/Particle
- Particle scored in Corner Vortex..... 1 point/Particle

**End Game Scoring:**

- Claimed Beacon..... 10 points/beacon
- Cap Ball raised off floor but below 76 cm (30 inches)..... 10 points
- Cap Ball raised above 76 cm (30 inches).....20 points
- Cap Ball scored in Center Vortex Goal..... 40 points



# Gracious Professionalism®

FIRST uses this term to describe our programs' intent. This is one of the most important concepts that can be taught to a young person who is learning to get along in the work world. At FIRST, team members help other team members, but they also help other teams.

Gracious Professionalism® is not clearly defined for a reason. It can and should mean different things to everyone.

Some possible meanings of *Gracious Professionalism* include:

- Gracious attitudes and behaviors are win-win.
- Gracious folks respect others and let that respect show in their actions.
- Professionals possess special knowledge and are trusted by society to use that knowledge responsibly.
- Gracious Professionals make a valued contribution in a manner pleasing to others and to themselves.

An example of *Gracious Professionalism*® is patiently listening to a team's question and providing support despite having several pressing things to do on the day of the event.

In the context of FIRST, this means that all teams and participants should:

- Learn to be strong competitors, but also treat one another with respect and kindness in the process.
- Avoid leaving anyone feeling as if they are excluded or unappreciated.
- Knowledge, pride and empathy should be comfortably and genuinely blended.

In the end, *Gracious Professionalism* is part of pursuing a meaningful life. When professionals use knowledge in a gracious manner and individuals act with integrity and sensitivity, everyone wins, and society benefits.



Watch Dr. Woodie Flowers explain *Gracious Professionalism* in this [short video](#).

*“The FIRST spirit encourages doing high-quality, well-informed work in a manner that leaves everyone feeling valued. Gracious Professionalism seems to be a good descriptor for part of the ethos of FIRST. It is part of what makes FIRST different and wonderful.”*

- Dr. Woodie Flowers, FIRST Distinguished Advisor and Pappalardo Professor Emeritus of Mechanical Engineering, Massachusetts Institute of Technology

## Gracious Professionalism for Volunteers

It is a good idea to spend time going over this concept with Volunteers. Provide Volunteers with real-life examples of *Gracious Professionalism* in practice before, during, and after the event and recognize great *Gracious Professionalism* when you see it in action!

# Youth Protection Program

The purpose of the *FIRST*® Youth Protection Program (*FIRST* YPP) is to provide Coaches, Mentors, Volunteers, employees, others working in *FIRST* programs, team members, parents, and guardians of team members with information, guidelines, and procedures to create safe environments for everyone participating in *FIRST* programs.

The *FIRST* YPP sets minimum standards recommended for all *FIRST* activities. Adults working in *FIRST* programs must be knowledgeable of the standards set by the *FIRST* YPP, as well as those set by the school or organization hosting their team.

## Youth Protection Expectations and Guidelines

Coaches and Mentors are expected to read and follow elements in the *FIRST* Youth Protection Program guide that are labeled as required are mandatory in the United States and Canada, and may not be waived without the approval of the *FIRST* Youth Protection Department.

*FIRST* recommends that the standards set forth in the *FIRST* Youth Protection Program guide be applied outside of the United States and Canada to the extent possible. At a minimum, local regulations regarding youth protection must be complied with.

Everyone working with *FIRST* teams should be familiar with the *FIRST* YPP policies.

Forms are available here: <http://www.firstinspires.org/sites/default/files/uploads/about/FORMS.zip>

Information on the US Screening process is available here: <http://www.firstinspires.org/sites/default/files/uploads/about/us-screening-2016-2017.pdf>

Information on the Canadian Screening process is available here: <http://vimeo.com/30137373>

You can find FAQ and additional information about the *FIRST* Youth Protection Program on the *FIRST* website at: <http://www.firstinspires.org/resource-library/youth-protection-policy>

## NOTICE OF NON-DISCRIMINATION

United States Foundation for Inspiration and Recognition of Science and Technology (*FIRST*®) does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Lee Doucette, Youth Protection Program Manager, 200 Bedford Street, Manchester, NH 03101, 603-666-3906, Ext. 250.





## ADA Spectator Seating

ADA Spectator Seating will be available for this event.

## Admission

Admission is free and open to the public. We encourage all guests to register ahead of time in our experient system: <https://www.firstchampionship.org/attendee-registration-houston>

As everyone is expected to be badged, registering early will help those attending from waiting in long-lines and get them to all the fun that much faster.

## Badges for Competition, Teams

### Drive Team Badges

Each team will receive **Drive Team** badges as a part of their Team Registration packet. Wear the badge on the front of your shirt near the **left shoulder** so Referees, Judges, and Queuers can see it. These badges allow the wearers access to the playing field and designate:

- One Coach Badge (this badge has a dot on it. The Coach cannot score points or drive the robot.)
- Two Driver Badges

**IMPORTANT!** Teams participating in the Semi-Final and Final rounds will each receive an extra access button that will give one additional Team member access to the field. Teams will be asked to report directly to the field and to be queued and ready to go. Plan to bring your robot, extra batteries, spare parts, your tool kits, and one member of your repair crew with you as there will be no time for teams to run back to the pit. Temporary Pits will be set up close to the competition fields.

### Media Badges

Each Team Registration packet will contain 1 non-transferable Team Media Pass and a copy of the Media Pass Guidelines. The Media representative for a team will be permitted in designated media access areas only during their team's matches. Team Media representatives are **not** permitted on the playing field surface, on the playing field floor during final rounds or ceremonies, or in any private venues, VIP, Volunteer, or Judges' areas, or the **FIRST**

Media Center for professional, bona fide media. Mascots will not be recognized as an official Team media person, unless they are wearing the Media Pass.

**TIP!** Assign someone to keep the drive team badges in a safe place, such as a toolbox, when not in use. Please do not bring them to your hotel, as teams often forget to bring them back the next day! There are no replacement badges!

## Ceremonies and Events

This year there will be several exciting events for Teams to attend.

For the full schedule and list of activities, check out the **FIRST** Championship website: <https://www.first-championship.org/first-tech-challenge-houston> or download the Championship App and keep up to date wherever you are!

## JOIN US TO MEET AND CONNECT WITH FELLOW **FIRST** ALUMNI FROM AROUND THE WORLD.

### HOUSTON

George R. Brown Convention Center  
Level 3 – *Outside of the Innovation Faire*

– LIGHT APPETIZERS – PROVIDED

PRESENTED BY  
The Boeing Company  
NVIDIA Corporation

### ST. LOUIS

Marriott St. Louis Grand Hotel  
Statler Ballroom  
Level 1

– LIGHT APPETIZERS – PROVIDED

PRESENTED BY  
BAE Systems  
The Boeing Company  
NVIDIA Corporation



# Alumni Mixer

HOUSTON  
April 20

ST. LOUIS  
April 27

7:30 PM Central

A SPECIAL THANK YOU TO Rene Haro, **FIRST**Robotics Competition Team 1538, for the Alumni Mixer poster design.

# LEARN SOMETHING NEW AT THE FIRST CHAMPIONSHIP CONFERENCES!



*Teams — Do you need to improve technical skills, project management skills, or find ways to increase the impact of your outreach activities? Are you looking for a scholarship, internship, or job with one of our Sponsor companies?*

*Coaches and Mentors — Do you need to learn new ways for your team to fundraise, improve your team management skills, or find more resources for your team?*

You will find sessions and workshops on those topics, the latest new innovations from industry professionals, and much more!

The 2017 FIRST Championship Conferences are free of charge and open to all. Sessions and Workshops are conducted by Sponsors, Coaches/Teams, Experts, and FIRST Staff.

**Schedule, Locations, and Session/Workshop Descriptions** are available on the **FIRST Championship App** and the **FIRST Championship website** at [firstchampionship.org](http://firstchampionship.org). Or stop by the information table in the hallway near the conference rooms for more details.

#### LOCATION / SCHEDULE

George R. Brown Convention Center  
Level 3, Rooms 370 A-E

Wednesday, April 19 ... 4:00 PM – 8:00 PM

Thursday, April 20 ..... 8:30 AM – 4:30 PM

Friday, April 21 ..... 8:30 AM – 4:30 PM

## Consent & Release Forms and Team Roster

Upon checking in, teams must provide a Team Roster and any paper-copy Consent and Release Forms for students or mentors that did not complete the form electronically. If under 18, Consent and Release Forms require a parent/legal guardian's signature. For more information and access to the paper-copy: <http://firstinspires.org/resource-library/youth-team-member-consent-and-release-form>

## Dean's List Finalists

FIRST Dean's List Finalists are outstanding student leaders whose passion for, and effectiveness at, attaining FIRST ideals is exemplary. Dean's List Finalists and one chaperone are invited to Dean's List Luncheon celebration where the 10 FIRST Tech Challenge Dean's List Winners will be announced! Learn more and see previous winners here: <http://firstinspires.org/robotics/ftc/deans-list>.

## Dress Appropriately and Safely

Be aware of apparel and hair safety issues while working on your Robot. Sandals, open-toed shoes, and Crocs are not allowed in the Pit. Wear relaxed, fun and appropriate clothing; remember, you represent your team and FIRST. Body paint in lieu of

clothes is not appropriate. Bathing suits and other revealing clothes are also not appropriate.

## Driver's Meeting

A Mandatory Drivers Meeting will be held on **Wednesday at 1:30pm** on the Competition Fields. Qualification Matches will begin at 2:00pm on Wednesday.

## Elimination and Final Rounds

Prior to the Championship, refer to the [Game Manual Part 1 Section 4.6](#) for information on Alliance Selection, elimination and final rounds, tournament rules, and the Championship match ladder.

## FIRST® Innovation Faire

Be sure to visit FIRST's Sponsors at the Innovation Faire! Check the website for specific innovation faire info at <https://www.firstchampionship.org/innovation-faire-houston>

## FIRST® LEGO® League

FIRST® LEGO® League World Festival brings together 108 teams from across the globe together to showcase their Core Values, the Project solutions that connect people and an-





imals as allies in the quest to make life better for everyone and their 2 ½ minute robot competition matches that will leave you amazed at the skill and strategy of future STEM leaders.

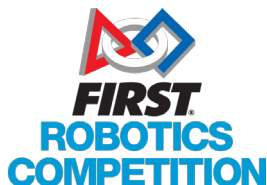
### **FIRST® LEGO® League Jr.**

Each year, *FIRST® LEGO® League Jr.* presents a new and exciting Challenge to ignite the creativity of children age 6 to 10. While exploring the real-world theme, teams will use basic engineering concepts to build a model made of LEGO® elements. They will also learn to present information through a Show Me Poster. This year, 60 *FIRST LEGO League Jr.* teams from around the world will be showcasing their experiences at the *FIRST® LEGO® League Jr.* World Festival Expo.



### **FIRST® Robotics Competition**

Combining the excitement of sport with the rigors of science and technology, 400 *FIRST® Robotics Competition* teams from around the world gather together to showcase their creativity and innovation. After a six week build time and an eight week competition season, the *FIRST® Championship* is the ultimate celebration.



## **Game Rules**

Prior to arriving, review the *VELOCITY VORTEX<sup>SM</sup>* presented by Qualcomm® rules both in the Game Manual Part 1 and Part 2, as well as the updates posted to the [Game Forum](#). Teams are responsible for knowing and following all the rules and guidelines as outlined. You can access all Game & Season Materials here: <http://firstinspires.org/resource-library/ftc/game-and-season-info>

## **Incident Reporting**

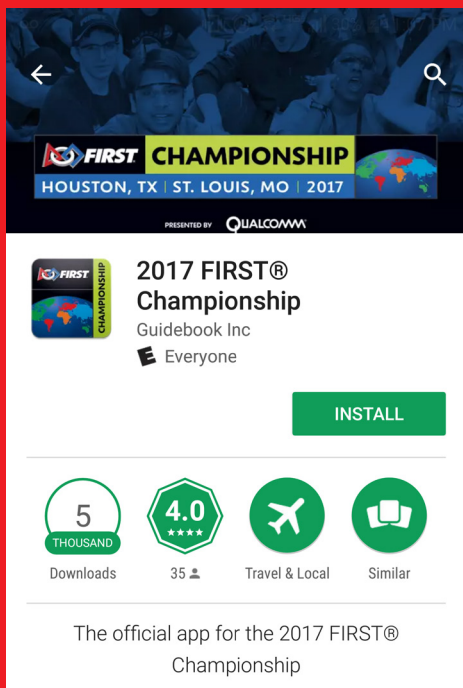
Report injuries and illness to the Pit Administration area when they occur so a *FIRST* staff member can meet with the injured/ill party and document the incident or problem. This is an extremely important part of the event and we appreciate the cooperation of those involved. If anyone witnesses the accident, their input will be helpful also and may be useful in preventing future problems.

## **Inspection**

Remember that robot inspections start at **8:00 am** on Wednesday and Qualifying matches begin at **2:00 pm** on Wednesday. All inspections will take place on the competition fields in the Grand Ballroom.

**Appointment times are non-negotiable!** The Inspectors often spot problems and provide suggestions for correction. Your robot must pass inspection

Stay up to date!



# **FIRST Championship App**

Enhance your *FIRST Championship* experience with the *FIRST Championship App*. The App includes interactive maps, personalized schedules, activities, team information, and so much more! Search the App Store or Google Play for *FIRST Championship*, or point browser to: <http://www.firstchampionship.org/event-app>



FIRST Tech Challenge Awards Ceremony, 2016

[blogspot.com/2015/02/whats-with-control-award.html](http://blogspot.com/2015/02/whats-with-control-award.html)

## Lost and Found

All lost items will be returned to the Pit Admin. If you find you have lost items after the event is over, please contact [FIRST-TechChallengeTeams@firstinspires.org](mailto:FIRST-TechChallengeTeams@firstinspires.org).

## Mascots

Keep safety in mind. Make sure that mascot and team costumes are safe for the wearer as to vision and movement and are

comfortable and cool enough to prevent fainting and dehydration. Mascots are not allowed on the playing field unless they are part of the Drive Team. Nor are they allowed in the media designated area without a Media Pass.



## Mentor/Coach Celebration

All Mentors and Coaches across all four programs are invited to join FIRST in celebration of all they have done for their team, students, and community.

**April 21st, Friday**

**GRB Convention Center Theater**

7:00 – 7:45 AM

## Non-Medical Incident Reporting

Report incidents relating to safety or *Gracious Professionalism*® to the Pit Admin area.

## Pit Announcements

In an effort to keep announcements to a minimum, we will group together announcements to be made at **20 past and 40 past the hour**. Announcements are to be limited to spare part or programming assistance requests by teams only. Birthday announcements, trivia, games, team shout-outs, etc. are not allowed.

to compete, but it doesn't have to be completely ready in order to request a preliminary inspection. Be sure that your robot meets the guidelines as outlined in the Game Manual Part 1 and Part 2, as well as stipulations posted to the Game Forum (see "[Game Rules](#)" for more information and a link to the documents).

**TIP! Take a look at the Robot and Field Inspection Checklist and review exactly what the Inspectors are looking for on our Volunteer Resources Page: <http://firstinspires.org/resource-library/ftc/volunteer-resources>**

Teams will have one Inspection appointment time. During your appointment, your team's Robot will move through a Hardware Inspection and Field Inspection. Be sure to be prepared when arriving to your Inspection appointment.

## Judging

**Team Judging starts at 8:00 am on Wednesday.**

Your scheduled meeting times are posted on your Team Registration packet. Arrive early to your appointment and bring your Engineering Notebook with Control Award Content Sheet (see below) and your Robot. Please note that there will be no power available in Judging Rooms. Teams should review the judging process and criteria in the Game Manuals prior to their Judging appointment.

**IMPORTANT!** To be considered for the Control Award, teams must submit a Content Sheet describing the observable actions of the control software. Judges will use this sheet when observing robots on the competition field to evaluate how well they perform. Read more here: <http://firsttechchallenge>.



## Pits

**HOURS:** *FIRST* Tech Challenge Pits open for Team Registration at 6:00am on Wednesday. Thursday and Friday the Pits open at 7:00am. Pits close at varying times each day. **TEAMS MUST VACATE THE PITS ON TIME.**

**IMPORTANT!** Please plan to arrive in the Pit when the doors open at 7:00am on Thursday and Friday. Teams who will be participating during the first 6 matches in the morning will be asked to be in queue and at the playing field well in advance of the 8:00am start.

### Pit Closing

Teams must be cleared from the Pit area by **Saturday at 3:00pm**. Work crews with heavy equipment will be removing and packing all the Pit resources, making it unsafe for teams to be in the area. For teams advancing to the semi-final and final rounds, Pits should be cleared before you attend the Closing Ceremonies. There will be no opportunity to return to the pit afterward.

### Pit Safety and Age Stipulation

EMTs leave the premises at Pit closing time. For team members' safety, please be respectful of the Pit closing time each day. Children aged twelve (12) and under must have an adult, aged eighteen (18) or older, with them at all times.

### Pit Stations

Each Team is allocated a **10' x 10' (3.05 x 3.05 m) Pit space**. Extending beyond your Pit space is not allowed and you must set up your Pit within your Pit area (*using the aisles is not allowed*). Each Pit will have access to one outlet in a dual outlet box. Teams should remember to be gracious in their positioning and usage of the dual outlet box. Aisles must be clear for robot movement, safe-



ty, and queuing reasons, so we suggest that team members watch the matches and cheer on the teams instead of overflowing the pit stations into the aisles. One table is provided, but no chairs. **There is a 10' (3.05 m) height limit.** Structures, signage, or banners cannot be higher than ten feet above the floor. Do not build any structure that supports people or stores items above the work area/pit space. If the height exceeds ten feet, you will be asked to take it down. No advance placement requests are available. Positioning is numerical by division. **No requests for displays, additional tables, Pit locations, division assignments, meeting rooms, or additional space will be considered.**

**TIP!** Pit size is determined by the venue. The allotted space maximizes the number of teams attending and their locations are random to help teams meet teams from around the world.

Take the opportunity to get to know your neighbors and always remember your Gracious Professionalism®.

### **Practice Fields**

Practice fields are available on a first come, first served basis. Teams must sign up for a time with the Practice Field attendant. Wi-fi and power will not be provided at the practice fields. Teams should plan accordingly.

### **Pre-Order Lunches**

Lunches are available and can be ordered using the form found on the *FIRST* Championship website: <https://www.firstchampionship.org/plan-your-visit-houston>. Get your order early

## Queuing

Teams are responsible for knowing their match times and will have to queue up a half hour prior to their matches without the help of an announcer. For Qualification matches, *FIRST* will make every effort to keep close to the published schedules. Keep close watch of the pit display for any moment-to-moment changes. If your team is one of the first six matches



of the day, queue early enough to be on the field before the Opening Ceremony.

**IMPORTANT!** Please plan to arrive in the pit when the doors open at 7:00am. *Teams who will be participating during the first six matches in the morning will be asked to be in queue and be at the playing field well in advance of the 8:00am start.* When Queuers come to collect you, be gracious and don't delay. Not arriving on time for your match will result in match forfeiture.

## Safety

*FIRST* works closely with local officials to secure the safety of all event participants. We encourage team leaders to help keep everyone safe by asking their teams to adhere to a buddy system when moving about the city.

Please do not venture out into the city on your own. Look to your hotel personnel, and the info booth lo-

located outside of the Pits for assistance in locating a destination in the city. If you are commuting in via the subway or bus transportation system, allow yourself extra time to get to the event. Provide your team with key contact information for your designated **Team Leader(s) or Safety Captain:**

- personal contact cell phone numbers
- hotel and room number(s)

Provide a cell phone number and your team's hotel name at event registration. Provide pre-determined meeting points in case anyone gets lost, and have a daily meeting with your team to emphasize the importance of all-around safety while at the event.

## Event Safety

For safety reasons, individuals entering the event are subject to search by security personnel. Be mindful of the nearest exits while in the venue so you and your team members know where to go/how to exit in case of an emergency. Review safety procedures and cautions with your team prior to traveling to the event, and designate an emergency meeting spot. Make sure that team members know how to reach one another in the event of an emergency.

Teams are encouraged to have a safety plan ready



**TIP!** *Be aware of the time. No unauthorized individuals are allowed in the Pit/Competition areas before Pits are open or after Pits are closed.*

*If you forget something in your Pit, you will have to wait until the Pits are open. This is for your safety and security. Have a plan and checklist for the end of the day!*



in the event of emergencies. Note all the nearest exits from the pit and competition areas and determine a meeting place outside the building. In the event of an emergency, teams should listen to the announcements and instructions given in the field and pit areas for specific instructions.

**TIP! You will be reminded by Volunteers, FIRST Staff and even venue staff to wear your Safety Glasses. Make it a priority for your team to follow this rule.**

**When reminded, remember to thank the individual. This is where your Gracious Professionalism® really shows.**

### **Safety Glasses**

Teams must bring ANSI-approved, UL-listed or CSA rated safety glasses for every Team member and guest. **Every person in the Pit and competition areas must wear them.** Rose, blue, and amber tints are OK, but reflective lenses are not. The eyes of the wearer must be clearly visible to others.

To qualify as safety glasses, regular corrective vision glasses must be polycarbonate/plastic material with attached safety side shields. You must wear safety goggles over all other corrective glasses.

### **Schedule and Team Lists**

Print and bring the latest Championship Schedule. Also print enough division Team lists to help with your Team's scouting efforts. One paper copy of Team lists will be provided upon check-in.

### **Scoring Disputes**

All questions about a Match or scores must be brought forward to the Referees by using the Referee [Question Box](#) located in the Competition Area. Only one *representative* from an Alliance is permitted to enter the question box, and must do so within the outlined time based on the type of Match being played:

- Qualification Matches: A team must enter the question box to dispute a Match **within the time period of three (3) Matches** following the disputed Match.
- Elimination Matches/Final Matches: A team must enter the question box to dispute a Match **before the start of the next**

**match played by the Alliance**, regardless if the team is participating in the next Match. The next Match played could involve different Alliances.

The student representative should be prepared to cite the rule in question to the Referee. Head Referees will only discuss calls, scores, penalties, or Match outcomes with students. **The Head Referee's ruling is final, and there is no recourse.** There is no review of tape or digital media. Refer to rule <T2> in the Game Manual Part 1.

### **Site Restrictions**

Please read the following restrictions and adhere to them in order to promote an orderly, safe, pleasant, and exciting competition. As a group, we all should honor agreements with the venue and help promote the spirit of good partnership. Please:

- Use of Hoverboards is not permitted at any *FIRST* event
- Use of Drones is not permitted at any *FIRST* event
- Do not use noisy devices, such as whistles or air horns.
- Do not save seats. It is not fair to other Teams



- or to the public guests we hope to interest as Team sponsors or volunteers.
- Do not ship robots directly to the site.
- Do not try to arrange for Internet access on the site or use hot-spots, or other personal phone lines for internet access.
- Do not sell any products. This includes food,



hats, shirts, or any promotional products.

- Do not bring any type of gas tanks, including helium
- Do not bring live bands to play in the audience. This dilutes the presentation on the playing field and is too loud and confusing for the audience.
- Do not play loud music in the Pit because it interferes with important announcements. If a Team receives more than two warnings, the power to the Team's Pit Station will be shut off and/or the music confiscated.
- Do not use excessively loud cheering devices such as whistles, air horns, or anything that may cause hearing damage, or interfere with other participants' event experience.
- Do not run in the venue.
- Open-toed shoes or Crocs are not allowed in Pit spaces.
- Do not form "tunnels" during the Awards Ceremony or at any time since this can cause discomfort to those traveling through them. It also creates safety issues.



opportunity this is for you and for the future of our society as a whole. Praise others and offer assistance when you can. The *FIRST* community is a better community with you in it engaging in *Gracious Professionalism* and *Coopertition*®!

### Shipping

Location and *FIRST* Tech Challenge are **not able to accept shipment of robots or materials from teams**. Teams must bring their robot and all needed supplies, as well as their Pit display to the Pits directly on Tuesday 4/18 (for early bird check-in) or Wednesday 4/19 and remove everything by 3:00pm on Saturday 4/22.

Location and *FIRST* Tech Challenge are not responsible for any lost or damaged items that are shipped directly to the site. Remember, to reduce the risk of losing your Robot or other important items, **DO NOT SHIP TO SITE**.

### Student Ambassadors

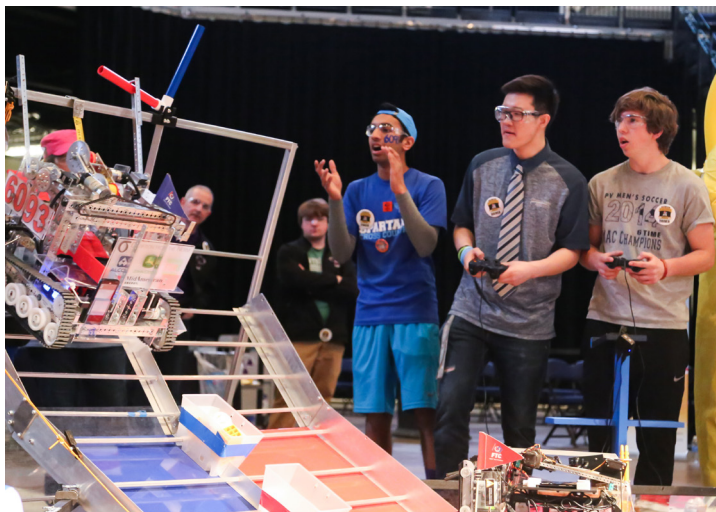
As part of the *FIRST* Championship, we ask *FIRST* participants to assist us in providing fun and exciting tours to our generous Sponsors and other special guests. We know our students are our best tour guides, and our guests would love to meet you! Volunteer to be a Student Ambassador at the *FIRST* Championship this year and show our guests what *FIRST* is all about. This role will be one to two hours during the entire event

### Team Registration and Check-In Early Bird Check-In

To help alleviate delays and long lines on Wednesday morning, we are opening the Pit for early bird



- DO bring your *Gracious Professionalism*! Please remember that there are thousands of other students, mentors, and event attendees that are all just as anxious as you and your Team. The event experience is an overall experience, not just a robot competition. Take the time to recognize what a great



to set up their own wireless networks at the Championship. This is **<rule T7>** as outlined in the [Game Manual Part 1](#). While we certainly appreciate the positive potential Team-created wireless networks could represent, there is a chance such wireless networks could interfere with planned activities during the event.

check-in on Tuesday, 4/18.

Registration will reopen on Wednesday at 6:00am. The team main or alternate contacts are the only individuals able to register their team. Please form a single line by division. You will be asked to provide a cell phone number and hotel name in case we need to reach you in an emergency. Upon registration, Teams will receive a registration packet containing (at a minimum):

- Team badges (1 per person)
- Division Pit Map (1)
- Division Team List (1)
- Driver Badges (3)
- World Championship Schedule (1) including Judging and Inspection appointments
- Team Media Pass (1) with Guidelines
- YPP Brochure (3)
- *FIRST* Championship Program Guide, Team List, Schedule

## Updates and Changes

Refer to the white boards in the Pit Admin area for new/updated information and listen for announcements.

For most up to date changes, check out the Event App.

**TIP!** *The Schedule is subject to change.*

*Check out the Championship App for the most up to date schedules.*

## Wireless Networks

Due to the wireless nature of *FIRST* control systems, wireless availability will be evaluated during the course of the event. Teams will not be allowed



# Additional Resources

## Game Forum Q&A

<http://ftcforum.usfirst.org/forum.php>

Anyone may view questions and answers within the *FIRST* Tech Challenge Game Q&A forum without a password. In order to submit a new question, you must have a unique Q&A System User Name and Password for your team.

## *FIRST* Tech Challenge Game Manuals

Part 1 and 2 - <http://firstinspires.org/resource-library/ftc/game-and-season-info>

## *FIRST* Headquarters Pre-Event Support

Phone: 603-666-3906

Mon – Fri

8:30am – 5:00pm

Email: [FIRSTTechChallengeTeams@firstinspires.org](mailto:FIRSTTechChallengeTeams@firstinspires.org)

## *FIRST* Websites

Homepage: [www.firstinspires.org](http://www.firstinspires.org)

*FIRST* Tech Challenge Page – For everything

*FIRST* Tech Challenge: <https://www.firstinspires.org/robotics/ftc>

*FIRST* Tech Challenge Volunteer Resources – To access public Volunteer Manuals:

<https://www.firstinspires.org/resource-library/ftc/volunteer-resources>

## *FIRST* Tech Challenge Social Media

*FIRST* Tech Challenge Twitter Feed - If you are on Twitter, follow the *FIRST* Tech Challenge twitter feed for news updates.

*FIRST* Tech Challenge Facebook page - If you are on Facebook, follow the *FIRST* Tech Challenge page for news updates.

*FIRST* Tech Challenge YouTube Channel – Contains training videos, Game animations, news clips, and more.

*FIRST* Tech Challenge Blog – Weekly articles for the *FIRST* Tech Challenge community, including Outstanding Volunteer Recognition!

*FIRST* Tech Challenge Team Email Blasts – contain the most recent *FIRST* Tech Challenge news for Teams.

*FIRST* Tech Challenge Google+ community - If you are on Google+, follow the *FIRST* Tech Challenge community for news updates.

