

FIRST. 2024 CHAMPIONSHIP

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FIRST TECH CHALLENGE

Event Guide Addendum
Updated 4/11/24

LIGHTS. CAMERA. STEAM!

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Introduction

The 2024 *FIRST*® Championship will join thousands of students for the ultimate celebration of STEM (science, technology, engineering, and math) and innovation. This 2023-2024 season, *FIRST*® IN SHOWSM presented by Qualcomm, we are shining a spotlight on the role STEM plays in the arts and empowering young people to design and build a world of endless possibilities. Join us as we celebrate a future that is built better together at *FIRST* Championship.

Get ready to have fun and be part of something extraordinary! We cannot wait to see you!

Accessibility at the Championship

If a team member needs ADA accessible seating, please request that during the Championship registration process. Each program will make available accessible seating that accommodates as many of the team members as possible. All Closing Celebration activities will be Closed Captioned.

Alliance Selection

Teams must be prepared for Alliance Selection. Alliance selections will take place Friday evening at 4:45pm CT. With 224 teams competing in four divisions we will select four alliances for each division. Each alliance will be made up of three teams.

First, we will create four alliances for each division, with the first pick going to the team with the highest ranking from the qualification matches. After the number one seed makes their selection, the next highest ranked and unpicked team will then make their selection. We continue this process until we have four complete alliances per division, each alliance made up of three teams. The student representative from the highest ranked team on an alliance is that alliance's captain.

After an alliance captain extends an invitation to join their alliance, one representative from the invited team will either accept or decline the invitation.

There is only one rule during alliance selection. If a team declines an invitation to become an alliance partner, that team may not be invited by any other alliance. The declining team does not, however, lose their right to select if they become an alliance captain.

For example: if the number one ranked team picks the number two ranked team and they decline, team two keeps their right to be an alliance captain and team one will need to extend the invitation to another team. If team two accepts the invitation, then all the other alliance captains would move up and the fifth highest ranked team becomes a final alliance captain.

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App

Download [the FIRST Championship App](#) for interactive maps, personalized schedules, activities, team info, volunteer info, alerts, and more.

Block Party at Discovery Green

Wednesday, April 17, 2024 – Friday, April 19, 2024

The *FIRST* Championship Discovery Green Block Party is the outside extension of our campus. A variety of activities will be available throughout the week such as giant family and lawn games, Live Band Karaoke, Silent Disco and musical acts. Discovery Green is directly across from the George R. Brown Convention Center. A detailed schedule of activities will be available in the app.

Card – Yellow and Red Cards

<C03> Yellow and Red Cards - Yellow cards and red cards are used in the *FIRST* Tech Challenge to manage Team and Robot behavior that does not align with the mission of *FIRST*. Yellow and red cards are not limited to just the Competition Area. Egregious or repeated (3 or more) Robot or Team member behavior at a Competition can result in a yellow and/or red card. Yellow cards are additive, meaning that a second yellow card is automatically converted to a red card. A Team is issued a red card for any subsequent incident in which they receive an additional yellow card, for example, earning a second yellow card during a single Match.

Yellow and Red Cards at the Competition Field

The head referee may assign a yellow card as a warning, or a red card for disqualification in a Match. A yellow card or red card is signaled by the head referee standing in front of the Team's Alliance Station and holding a yellow card and/or red card in the air.

To issue the second yellow card, the head referee will stand in front of the Team's Alliance Station and hold a yellow card and red card. The head referee will signal the second yellow card after the Match has ended.

A Team that has received either a yellow card or a red card carries a yellow card into subsequent Matches, except as noted below. A red card results in Match disqualification. Multiple red cards may lead to Competition disqualification. Once a Team receives a yellow card or red card, the Team number is presented with a yellow background on the audience screen for all following Matches. This is a reminder to the Team, referees, and audience that the Team carries a yellow card.

Yellow cards do not carry over from the Qualification Matches to the Elimination Matches. During the Elimination Matches, yellow and red cards count against the entire Alliance, not to a specific Team. If a Team receives a yellow card or red card, it results in the entire Alliance receiving the yellow card or red card for that Match. If two different Teams on the same Alliance are issued yellow cards, the entire Alliance is issued a red card. A red card results in zero (0) points for that Match, and the Alliance loses the Match. If both Alliances receive red cards, the Alliance which committed the action earning the red card first chronologically loses the Match.

[For more information about yellow and red cards please read the Game Manual Part 1.](#)

Check-In

Team Check-In is Tuesday, April 16, 3:00-6:30pm. Your team may also check in on Wednesday, April 17 from 7:00am to 8:00am. All teams **must** be checked in by 8:00am on Wednesday.

When teams check in, they will receive their team packet which contains their judging and inspection appointment schedule, driver and coach buttons, team schedules, event information, and media passes. To complete check-in, teams will need to send a coach to the registration desk (on the first floor or on the third floor near Pit Admin in the *FIRST* Tech Challenge Pit Area). Coaches should bring their ID so they can get the team badges printed. Team members will need official team badges to access most areas of the event. Please register all your team members before the event to speed up your registration and check in process on site.

Closing Celebration

Our closing celebration experience will bring together *FIRST*® LEGO® League Explore, *FIRST*® LEGO® League Challenge, *FIRST*® Tech Challenge, and *FIRST*® Robotics Competition celebrations under the roof of the George R. Brown Convention Center. Each program will have a custom experience, while a global broadcast throughout the convention center will keep attendees up to date on highlights from each program. All are invited to this joint Closing Celebration involving all programs. Please check the schedule for each programs ceremony time.

Coaches Meeting

FIRST Tech Challenge hosted a Virtual Coaches Meeting meeting on Wednesday, April 10th. [Here is a link to the call recording.](#) [Here is a link to the call slide deck.](#) These are helpful resources to get a high level overview of the upcoming event.

Coin Toss

For the Event Semifinals and Event Finals, the alliance captains from each alliance will take part in a coin toss. The team with the numerically lower team number will call the coin while it is in the air. If they correctly call the toss, they earn the right to choose the color for their alliance. If they are incorrect, the other alliance captain gets to make the choice.

Drivers' Meeting

Wednesday, April 17 at 2:45pm on the *FIRST* Tech Challenge Competition Fields. Teams should assemble in the stands. Drive teams should assemble in the center section of the Edison and Ochoa field stands. Non drive team team members should sit on the Jemison and Franklin stands side.

Engineering Portfolio

Teams must bring their Engineering Portfolio to their scheduled judging appointment. Please read [Game Manual Part 1](#) for Engineering Portfolio requirements. Engineering Portfolios will be returned to Pit Admin on Friday afternoon for team pickup.

FIRST Championship Conferences

The *FIRST* Championship Conference will be held Wednesday- Friday. The conference includes sessions and workshops on topics of interest to all members of the *FIRST* community in the following conference tracks:

- Discovery
- Innovation
- Impact
- Inclusion
- Teamwork

Sessions are either 15 or 45 minutes in length and will be held in rooms 340, 350 and 360 on the 3rd floor of the convention center. For a full list of conferences please download the app.

FIRST Store

The *FIRST* Store is your on-site source for merchandise made exclusively for the *FIRST* #STEMsquad, including limited edition *FIRST* Championship must-haves. The *FIRST* Store is located on site on Level 1, outside Hall C.

Hours of Operation:

Date:	Open:	Close
Wednesday, April 17, 2024	6:00 AM	6:00 PM
Thursday, April 18, 2024	6:00 AM	6:00 PM
Friday, April 19, 2024	6:00 AM	6:00 PM
Saturday, April 20, 2024	6:30 AM	After Closing Ceremonies

Food

Concessions

There are concessions located within the convention center, with many food options around the George R. Brown Convention Center as well. Local food trucks will be around Discovery Green. [View a list of nearby restaurants.](#)

The George R. Brown Center is now cashless. Because this is a new change, we are working with the venue to help teams manage the cashless system.

- Staff will be setup on the 1st floor (near our Main Registration) and 3rd Floor (near the Grand Ballroom lobby) at kiosks that will have the ability to accept cash and turn that into a GiveX card (a gift card that can be used at our R&C concepts) so they can use it throughout the week.
- Signage will be scattered on the 1st and 3rd floor letting people know, in addition to at the start of every R&C concept so they see that notice before waiting in line.
- The activation fee will be waived for these cards. They also will refund money that is still left on the card at the end of the event at those same kiosks, or individuals can keep the card with the money still loaded and will be able to use it next year.

Pre-Order Lunch

Pre-order lunches are available at the George R. Brown Convention Center.

- [Lunch Order Form](#)

Team Suggestions

- [Uptown Catering](#)

Health and Safety

All children under 12 must always be accompanied by an adult in the Pit area.

Be aware of apparel and hair safety issues while working on your robot. Sandals, open-toed shoes, and Crocs are not allowed in the Pits, fields, or other teamwork areas. Wear relaxed, fun and appropriate clothing; remember, you represent your team and *FIRST*. Body paint in lieu of clothes, bathing suits and other revealing clothes are not appropriate. Face coverings and vaccinations are not required but are recommended. If you are feeling ill, please do not attend the event.

Mascots

Please keep safety in mind and 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.

Medical Incidents

Incidents and Emergency Reporting

FIRST requires that physical injuries and medical problems, however slight, be documented and reported to the Pit Admin and to *FIRST* Headquarters within 48 hours (about 2 days) of the occurrence. If you need to report an incident (medical or non-medical), Pit Admin will have the proper forms. In case of an emergency, please evacuate with the teams and guests.

Reporting Non-Medical Concerns

[FIRST Online Reporting Portal](#)

This form can be used for any concern ranging from or related to volunteer issues, venue issues, Code of Conduct issues, or Youth Protection issues. [Read more about it here.](#)

Safety Glasses

Safety Glasses must be worn by everyone in the *FIRST* Robotics Competition and *FIRST* Tech Challenge Pit Area. Safety Glasses are available for spectators at the major Pit Entrances for these programs, but teams should plan to bring their own.

Security

Be sure to keep valuable items with you always or placed in a lockable compartment in your Pit station. *FIRST* and the George R. Brown Convention Center do not guarantee security of personal items. We strongly recommend that you do not leave behind valuable items in your Pits at any time, such as personal computers, cell phones, cameras, etc. You can report any lost items to the Event Information Desk (see Lost and Found). Remember, the Pits are open to the public. Please take proper security measures to protect your valuable items.

Prohibited Items

- Abusive, foul, or disruptive language
- Aerosol containers of any kind
- Animals (except service animals to aid guests with disabilities)
- Coolers*
- Fighting, taunting, threatening remarks, gestures, or harassment of any kind
- Fireworks, firearms, and weapons of any kind (including in parking lots)

- Glass containers of any kind
- Illegal substances, drugs, and drug paraphernalia
- Knives of any length except pocketknives no longer than 4"
- Laser Pointers
- Noisemakers (musical instruments, bullhorns, air horns, whistles, etc.)
- Outside Alcohol/Flasks
- Outside food or beverages*
- Smoking or the use of vapor (or similar) devices
- Throwing objects
- Trespassing, soliciting, peddling, and loitering
- Unauthorized/unlicensed vendors are not allowed.
- No unauthorized solicitation and materials including handbills, flyers, stickers, giveaways, samples, etc.
- Unmanned Aircraft Systems & Radio-Controlled Model Aircraft/Drones
- Any other item or action deemed dangerous or inappropriate

Event security reserves the right to deem any other item inappropriate. No prohibited item will be accepted at the entry gates for safekeeping.

*Exceptions will be made for those with medical requirements and/or special needs. Individuals with these special needs should contact a security person at their entry gate for special attention.

Innovation Faire

The Innovation Faire on **Level 2** brings together *FIRST* sponsors, supporters and students with engaging interactive events and booths. There will also be a college scholarship row, and other interactive exhibits. The students will take away a deeper understanding of why each sponsor celebrates STEM (Science Technology Engineering and Mathematics) as the basis for their companies' existence, and how they can be a part of it in the future.

Hours of Operation:

Wednesday, April 17, 2024	10:00am - 4:00pm Plus, <i>FIRST</i> Scholarship Providers and Alliances
Thursday, April 18, 2024	10:00am - 4:00pm Plus, <i>FIRST</i> Scholarship Providers and Alliances
Friday, April 19, 2024	10:00am - 4:00pm

Inspection

Wednesday, April 17, 8:30am - 2:30pm.

You will receive your inspection and judging appointment schedule via email a few days before the event. You will also receive your inspection and judging appointment schedule on site when you check in at Pit Admin.

Robot Hardware Inspection will take place in your team's pit area. Field Inspection will take place on our competition fields.

Appointment times for field and robot inspection appointments are non-negotiable. The inspectors often spot problems and provide suggestions for correction. Your robot must pass inspection to compete. Please 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](#).

Judging

Wednesday, April 19, 8:30am – 2:30pm

You will receive your inspection and judging appointment schedule via email a few days before the event. You will also receive your inspection and judging appointment schedule on site when you check in at Pit Admin.

Please arrive early to your judging appointment. Please bring your engineering portfolio, Control Award Content Sheet, and robot to your judging appointment with your team. Please note that there is no power available in the judging rooms. Teams may not prerecord their 5-minute presentation. Teams should review the judging process and criteria in [the Game Manual](#) prior to their judging appointment. If your team requires accommodation for judging, please email ftcteams@firstinspires.org and use the Subject Line: Judging Accommodations.

Load In & Load Out

Load In

Tuesday, April 16, 3:00pm – 6:30pm: Load In & Robot Helpdesk.

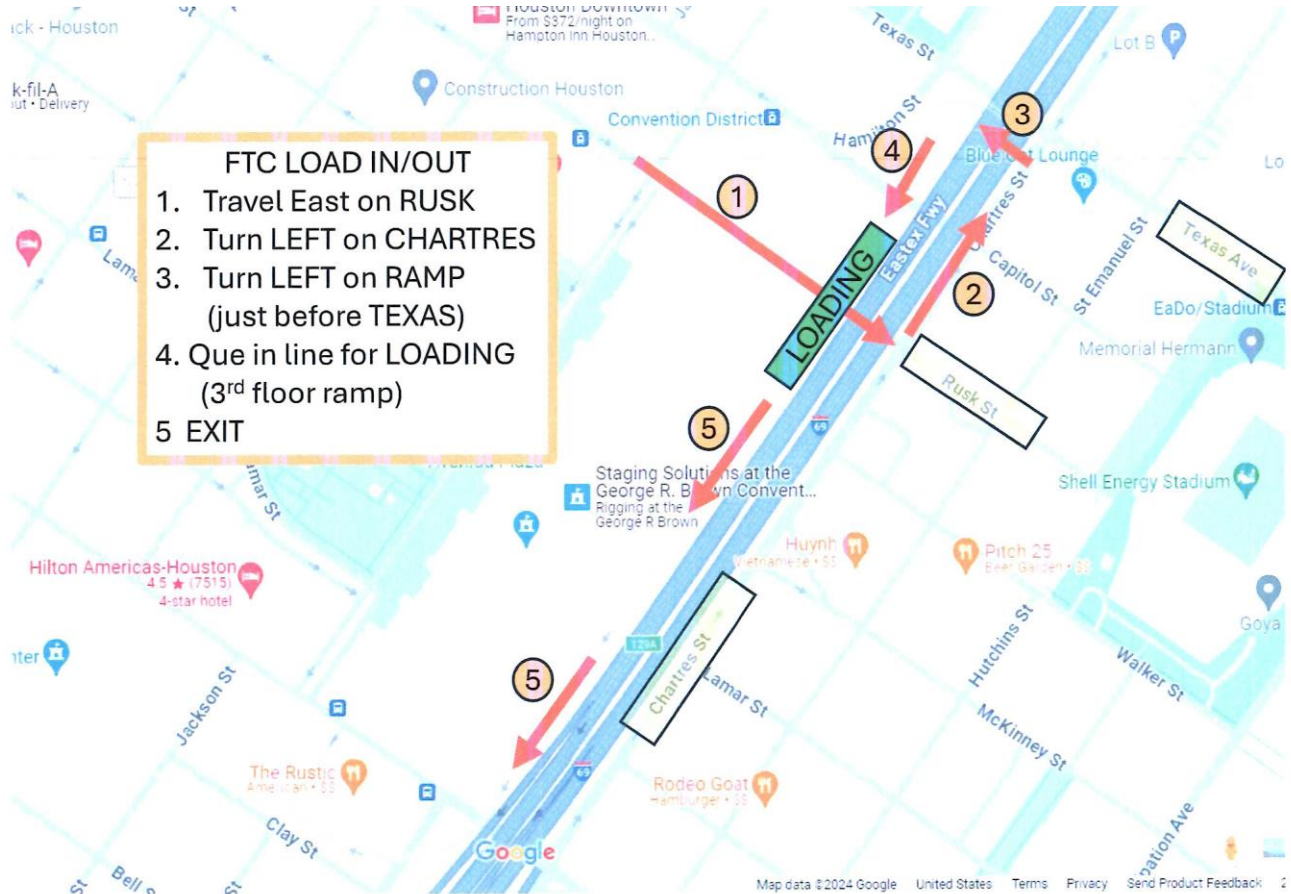
Wednesday, April 17, 7:00am – 8:00am: Load In.

Load In Process:

- Team will drive up to the third-floor loading dock at the entrance located on Chartres Street (on the back side of the George R. Brown Convention Center). Our loading docks will be behind Hall A and Hall B. See map below.
- Team vehicles will be check in at the entrance to the ramp, and then proceed up the ramp.
- Team vehicles will be directed to spaces by load in volunteers.
- Teams traveling in multiple vehicles need to arrive together in order to get load in spaces together.
- Teams cannot unload on Chartres Street or Avenida de Las Americas.
- **Teams cannot leave vehicles unattended at ANY time.**
- Load in volunteers will not have information on parking, please familiarize yourself with the parking options available in this document ahead of load in.

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Load Out

Saturday, April 20, 8:00am – 6:00pm

Staffed Load Out: 5:00pm – 6:00pm

Please be respectful of other teams and the public on your departure, leave your area clean, and be safe. Teams may carry their team supplies out of the front door at any time during the week, including on Saturday. There is no area for a vehicle to drive or park at the front of the venue.

Load out will be staffed with volunteers on Saturday from 5:00pm – 6:00pm.

Load Out Process

- Please have your driver place their orange load out pass in the front of the windshield of their vehicle. Vehicles will have to check in at the ramp entrance as they did during load in.

- On Saturday, when your team is completely packed and ready to load out, bring your packed equipment to the queue, Door A, by the loading docks on level 3.
- Check in with a Load Out volunteer, and then call your driver and have them proceed to the third-floor ramp (see map above). Note: If teams follow the map, they should avoid all FRC traffic.
- Team vehicles should arrive within 10-15 minutes of your call. Drivers cannot arrive before the team is in queue at the loading dock. If they do, they will be sent around to get back in the queue.
- Your driver will be directed to a loading dock space as they pull into the loading dock area by a load out volunteer. Drivers **MUST** stay with their vehicles.
- Please move your packed pit items to the assigned dock space when told by one of the load out volunteers.

Lost and Found

Items for lost and found will be logged in at the information desk near registration on the first floor for that day. At the end of the day, the items will be delivered to building security where they will remain through the event. At the end of the event and for up to 30 days (about 4 and a half weeks) post event, please call the facility directly for missing items.

George R. Brown Convention Center
713-853-8087 GRBinfo@houstonfirst.com

Items lost under the bleachers: Items of extreme importance such as medication, a purse or wallet, please note where you were sitting and check in at Pit Administration. Pit Administration will then contact security to retrieve your lost item. For all other items, security will make periodic sweeps and deliver found items to the Lost and Found at the information desk where you can then retrieve your items.

Under no circumstances should anyone but security go under the bleachers.

Match Play

Please see the official team schedule for match times. The official team schedule will be generated after all teams have checked in and passed inspection. Teams will play 10 qualification matches.

Buttons (Drive Team)

Each team will receive Drive Team buttons in their team registration packet. Please wear the buttons on the front of your shirt near the left shoulder so referees, judges, and queuers can see it. These buttons will allow the wearers access to the playing field and designate one coach button, two driver buttons, and one human player button.

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. Referees are not permitted to review video replays or images of matches.

Qualification Matches: A team must enter the question box to dispute a match within three matches after 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 of if the team is participating in the next match. The next match played could involve different alliances.

Media

Each team registration packet will contain one non-transferable team media badge and a copy of the media guidelines. The media representative for a team will be permitted in the designated media access areas only during their team's matches. This area is a front row of bleacher seats close to the field stages.

Team media representatives are not permitted on the playing field surface, the playing field floor, or in any private venues, VIP, volunteer, or judge's areas, or the *FIRST* Media Center for professional members of the media. Mascots will not be recognized as an official team media person unless they are wearing a media badge. There is no special access for media badge holders for final matches.

Parking

[Garage and Surface Parking](#) is available around the George R. Brown Convention Center. There is additional information on [parking available on the George R. Brown website](#).

Personal Expression

Event attendees are free to express themselves through personal apparel as long as it is respectful and not disruptive to other *FIRST* Championship participants and attendees. We ask you and our entire community to practice Gracious Professionalism and to adhere to the [FIRST Code of Conduct](#).

Pits

Each team is allocated a 10 foot by 10 foot by 10 foot (3.05 x 3.05 x 3.05 x 3.05 meter) 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 area will be provided with one six-foot table but will not be provided with chairs. Each pit will have access to one electrical 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 kept clear for robot movement, safety, and queueing, so we suggest that team members watch the matches and cheer on the teams at the fields instead of overflowing the pit stations and congregating in the aisles.

There is a 10-foot (3.05 meter) 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 10 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.

Please remember that everyone will be required to wear safety glasses in the pit area.

Announcements

Parts requests will be grouped together and announced every 30 minutes. To submit a request, write your division, team number, and needed part on a piece of paper and give it to the Pit Manager. Additional announcements will be made at half-hour intervals as well. Personal and irrelevant announcements will not be made.

Queueing

Teams are responsible for knowing their match schedule and must queue up before their matches without an announcer's help. For qualification matches, *FIRST* will make every effort to keep close to the published schedules. Keep a close watch of the pit display for any moment-to-moment changes. If your team is one of the first eight matches of the day, queue early enough to be on the field before the competition begins. When queuers come to collect you, please be gracious and do not delay. Not arriving on time for your match will result in match forfeiture.

Playing Fields

All playing fields are assembled and set up as described in the Game Manual Part 2 and the AndyMark Field Setup Guide with the following *FIRST* Tech Challenge approved setup options:

- **Truss:** To reduce movement during gameplay, three-inch metal washers are between the Truss A-frame legs and the playing field foam tiles as described in the AndyMark Field Setup Guide (revision 5), page 35.
- **Foam Tiles:** To reduce electrostatic buildup, heavy duty Staticide is applied to the playing field foam tiles.
- **Playing Field Walls:** AndyMark playing field walls are used.
- **Practice Playing Fields:** The playing field walls are not secured to the floor.
- **Competition Playing Fields:** The playing field walls are secured to the floor with screws.
- **Playing fields are split-up by division:** Edison, Ochoa, Franklin and Jemison.

Competition Fields

There are eight competition fields, two per division.

Setup: The playing fields, driver stations, driver station stands, and Drone Landing Zones are located on raised stages with a painted plywood decking. Landing Zone tape lines are placed directly on this decking. The decking is not guaranteed to have a uniform texture.

Access: Team access to competition playing fields is restricted to: a) scheduled field inspection appointments, b) scheduled qualification matches, and c) daily robot sensor calibration opportunities specified on the *FIRST* Tech Challenge team schedule.

Power: North American standard 3-prong (NEMA 5-15 Type B) power strip outlets are available to teams at the queueing tables. Drive teams do not have access to venue supplied power at the competition playing fields.

Safety: Procedures for safe entry and exit from the raised platforms are in effect. These procedures are described in the pre-event online Coach Meeting, during Field Inspection and the onsite Drivers' Meeting. Safety glasses and shoes with a closed toe and closed back are required at all competition playing field spaces.

Practice Playing Fields

There are eight practice fields, two per division.

Setup: Practice playing fields are assembled on the concrete venue floors and their Landing Zone tape lines are directly on the floor.

Access: The practice playing fields are operational during normal Pit hours on Wednesday, Thursday, and Friday. On Saturday, all eight practice playing fields are open from 7:30 a.m. until 9:00 a.m. After 9:00 a.m. on Saturday, four practice playing fields are available until 1:00 p.m. Teams are required to sign-up for practice field times.

Miscellaneous: Wi-fi, power, and driver station stands are not provided at the practice fields.

Safety: Safety glasses and shoes with a closed toe and closed back are required at all practice field locations.

Prayer Rooms

There will be two prayer rooms available for anyone wishing to observe religious practice onsite during event hours. Prayer rooms are located on the 2nd level of the Marriott Marquis Houston in Montgomery rooms A&B. The Marriott Marquis Houston is attached to the George R. Brown Convention Center and can be accessed from the level 2 skybridge located north of Mezzanine A.

Quiet Room

A Quiet Room is available for those participants who need a quiet space to de-stress and take a break from the busyness of the competition. If you would like to donate items (things like playing cards, board games, stress balls, puzzles) for the room, please bring them to the room. The Quiet Room is on the third floor, in room 372 F.

The Quiet Room hours are below:

Date:	Open:	Close
Wednesday, April 17, 2024	8:00 AM	7:00 PM
Thursday, April 18, 2024	8:00 AM	6:00 PM
Friday, April 19, 2024	8:00 AM	6:00 PM
Saturday, April 20, 2024	8:00 AM	6:00 PM

Registration and Badging

Please be ready to present your ID when picking up your badge. [Badges can be printed / reprinted with preferred name.]

Check-In

FIRST requires every Championship attendee to be registered and badged, including adult team mentors, youth team members, parents, family members, chaperones, etc. who are participating in the event. Attendee registration grants access to participant-only activities and increases the security of the event. We strongly encourage your team to complete attendee badging prior to your arrival, as this will expedite your team's attendee badge collection and your entrance to the event.

Consent and Release Forms

All participating team members and volunteers must complete a current season *FIRST* Consent and Release form. These will need to be visible on your team roster, or turned in in addition to your team roster at Team Pit Admin Check-In.

Pronoun Ribbons

Pronoun ribbons will be available at Central Registration and program Pit Admins.

Registration and Badging Hours

Central Registration Hours:

Date:	Open:	Close
Tuesday, April 16, 2024	7:00 AM	6:00 PM
Wednesday, April 17, 2024	6:00 AM	8:00 PM
Thursday, April 18, 2024	7:00 AM	6:00 PM
Friday, April 19, 2024	7:00 AM	6:00 PM
Saturday, April 20, 2024	7:00 AM	2:00 PM

Satellite Registration Hours:

Date:	Satellite Area:	Open:	Close:
Tuesday, April 16, 2024	<i>FIRST</i> Tech Challenge	3:00 PM	6:30 PM
Wednesday, April 17, 2024	<i>FIRST</i> Tech Challenge	7:00 AM	12:00 PM
Wednesday, April 17, 2024	<i>FIRST</i> Robotics Competition	7:00 AM	7:30 PM
Wednesday, April 17, 2024	<i>FIRST</i> LEGO League Challenge	11:00 AM	3:00 PM

Restrooms

Gender-neutral accommodations are available on site on level 3.

Robot Help Desk

FIRST Tech Challenge will have a Robot Help Desk at Tuesday Team Check-In from 3:00pm-6:30pm to help any teams with robots that might have been damaged while traveling. Please see the Pit Admin desk for assistance.

Robot Sensor Calibration

FIRST strives to provide consistent lighting conditions across all of the competition area playing fields. However, there will be lighting variation within an individual playing field and between different playing fields. Teams may access the competition playing fields to calibrate their robots' sensors during the times specified in the *FIRST* Tech Challenge Team Schedule.

Access to the playing fields for robot sensor calibration on Wednesday is only during the team’s scheduled field inspection time. Playing field access on Thursday through Saturday is first come, first served; advanced sign-up for times is not required.

Sensor Calibration Schedule:

Day	Time
Wednesday	During each team’s scheduled field inspection time.
Thursday	7:45 AM to 8:15 AM
Friday	7:45 AM to 8:15 AM
Saturday	7:45 AM to 8:15 AM
	Immediately following the Division Finals Matches.
	Immediately before the Event Final Matches.

Participation guidelines for robot sensor calibration include:

- Sensor calibration activities only; autonomous and driver-controlled program testing/practice are not allowed.
- Participation is limited to three (3) or fewer representatives per team.
- Be considerate of other teams’ time, playing field access, etc.
- Competition and Game rules apply as appropriate. For example:
 - Team members may not measure, test, or adjust game elements unless allowed by section 4.4.1 in Game Manual Part 2.
 - Safety rules <S03> and <S04> rules apply (safety glasses, closed-toe and closed-backed shoes, entering and exiting the stages, etc.)

Robot Service Booths

The robot service booths are in the *FIRST* Tech Challenge pit area. These booths are an opportunity for you to seek technical help, spare parts, or assistance with repairs from our vendors including AndyMark, Pitsco, and REV Robotics. We encourage all teams to check out their booths and thank them for their support.

Schedule

Schedules will be available on the *FIRST* Championship website and in the *FIRST* Championship App. The *FIRST* Championship App can be downloaded from our website, or you may search for “*FIRST* Championship” in the App Store or Google Play Store.

FIRST Tech Challenge Team Schedule:

FIRST.2024 CHAMPIONSHIP

PRESENTED BY

BAE SYSTEMS

TUESDAY	
3:00 PM – 6:30 PM	Pits Open
3:00 PM – 6:30 PM	<i>FIRST</i> Tech Challenge Team Check-In
3:00 PM – 6:30 PM	Robot Help Desk Available
WEDNESDAY	
7:00 AM – 7:00 PM	Pits Open
7:00 AM – 8:00 AM	<i>FIRST</i> Tech Challenge Team Check-In
8:30 AM – 12:00 PM	Scheduled Judges Interview Appointments, Scheduled Robot Inspection and Field Inspection Appointments
12:00 PM – 1:00 PM	Lunch
1:00 PM – 2:30 PM	Scheduled Judges Interview Appointments, Scheduled Robot Inspection and Field Inspection Appointments
2:45 PM – 3:45 PM	Drivers' Meeting @ the Competition Fields
4:00 PM – 4:45 PM	<i>FIRST</i> Tech Challenge Competition Kickoff and Welcome, Followed by Qualification Matches
5:10 PM – 6:45 PM	Qualification Matches
THURSDAY	
7:30 AM – 6:30 PM	Pits Open
7:45 AM – 8:15 AM	Robot Sensor Calibration Opportunity @ Competition Playing Fields
8:30 AM – 11:45 AM	Qualification Matches (Franklin and Jemison 8:30-11:15, Edison and Ochoa 8:30-11:45)
11:15 AM – 1:15 PM	Lunch (Franklin and Jemison 11:15-12:45, Edison and Ochoa 11:45-1:15)
1:00 PM – 6:00 PM	Qualification Matches (Franklin and Jemison 1:00-6:00, Edison and Ochoa 1:30-6:00)
FRIDAY	
All-Day	Tiara Friday
7:30 AM – 6:00 PM	Pits Open
7:45 AM – 8:15 AM	Robot Sensor Calibration Opportunity @ Competition Playing Fields
8:30 AM – 11:45 AM	Qualification Matches (Franklin and Jemison 8:30-11:15, Edison and Ochoa 8:30-11:45)
11:15 AM – 1:15 PM	Lunch (Franklin and Jemison 11:15-12:45, Edison and Ochoa 11:45-1:15)
1:00 PM – 4:30 PM	Qualification Matches (Franklin and Jemison 1:00-4:30, Edison and Ochoa 1:30-4:30)
4:30 PM – 4:40 PM	Mascot Parade (Meet at Pit Admin at 4:20 PM)
4:45 PM – 5:30 PM	Alliance Selection
SATURDAY	
All-Day	Suspender Saturday
7:30 AM – 6:30 PM	Pits Open
7:45 AM – 8:15 AM	Robot Sensor Calibration Opportunity @ Competition Playing Fields
8:15 AM – 8:45 AM	Elimination Matches Drivers' Meeting @ Competition Field-Side Bleachers

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9:00 AM – 11:30 AM	Division Semi-Final Matches, Division Final Matches
11:30 AM – 12:45 PM	Lunch
1:00 PM – 1:45 PM	One <i>FIRST</i> Closing Celebration
1:45 PM – 3:00 PM	Divisional Award Ceremonies
3:15 PM – 5:00 PM	Event Semi-Final Matches, Event Final Matches and <i>FIRST</i> Tech Challenge Finals Award Ceremony
5:00 PM – 6:00 PM	Load Out

*All times listed are in UTC/GMT-5, or Central Time and are subject to change. All times are estimated based on flow of matches. See Pit Administration for updated times.

Shipping

The George R. Brown Convention Center cannot accept shipments directly. Teams will need to make their own shipping accommodations.

Student Ambassador

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! 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. To volunteer please apply through Volunteer Registration.

Guests are invited to take an in-depth tour of the Championship with our most knowledgeable tour guides, our students! Tours are available Wednesday, Thursday, and Friday. All tours are subject to availability. Please see the Student Ambassadors desk located near registration to set up a tour.

Team Picture Area

There is a designated area at the *FIRST* Championship where teams are welcome to take group pictures with their sponsors, team mates etc. This area is located right outside of the GRB Convention Center. There will be a *FIRST* sign where teams can pose for their pictures to be taken. Please note, teams will need to supply their own photographers for the pictures.

FIRST Tech Challenge will also have a team picture area in Hall A3 with a *FIRST* Tech Challenge backdrop.

Venue Information

We are aware of the concerns members of our community have expressed regarding our continuing to host the *FIRST* Championship in Houston, Texas. We do plan to remain at the George R. Brown Convention Center in Houston for *FIRST* Championship through 2025, due in part to pre-existing contractual commitments.

We are keenly aware of the issues at stake in Texas and other states throughout the country, and we remain deeply committed to supporting the rights of LGBTQ members of our *FIRST* community wherever they live. We have built a strong relationship with the Houston mayor's office, which is committed to defending equal rights in Houston and has been recognized as one of Texas' strongest advocates for LGBTQ rights. We are proud of the work that the administration has

done to advance LGBTQ rights in Houston, and we are proud of their support of everything that *FIRST* does. In addition, the Harris County DA also supports LGBTQ rights and opposes the recent proposed legislation on transgender issues.

As we have in previous years' *FIRST* Championship, we will continue to remain focused on ensuring a safe and welcoming space for all participants at every one of our future events. If you have ideas about how we can make our spaces even more welcoming, we would be more than happy to discuss them with you.

Campus Locations

The *FIRST* Championship Event is a multiple point campus, which will include four venues/spaces:

George R Brown Convention Center

FIRST LEGO League Explore World Festival Expo, *FIRST* LEGO League Challenge World Festival, *FIRST* Tech Challenge *FIRST* Championship, *FIRST* Robotics Competition Championship, *FIRST* Championship Conferences, the *FIRST* Store, and the Innovation Faire including Scholarship Row.

The George R. Brown Convention Center is located on Avenida de las Americas. Visit the venue site here:
<http://www.grbhouston.com/>

Discovery Green

FIRST Championship Block Party

The Marriott Marquis Hotel

Headquarter Hotel

The Hilton America's Hotel

Headquarter Hotel along with a range of meetings and events.

All of this will contribute to the overall event goal of making a unique, transformative experience to all teams, sponsors, volunteers, and supporters of *FIRST* in a fun and safe environment in the city of Houston.

FIRST.2024 CHAMPIONSHIP

PRESENTED BY

BAE SYSTEMS

Local Transportation

Metro Transportation is available in Houston - [Purchase discount passes.](#)

POWER YOUR TRAVELS TO THE
2024 FIRST ROBOTICS CONFERENCE

Conference attendees can now explore our nation's fourth largest city with the **METRO FIRST Robotics Convention Pass**. Enjoy unlimited local bus and light-rail service, April 17 - 20, including travel to destinations across the city.

Pass Options

Single Day Pass (Student) - \$1.50	CLICK HERE TO BUY
Single Day Pass (Adult) - \$3.00	

DAY PASS

METRO
RideMETRO.org | Call or text 713-635-4000

Virtual Coaches Meeting

FIRST Tech Challenge will be hosting a Virtual Coaches Meeting for all our coaches attending our FIRST Championship. The webinar will be on Wednesday, April 10 at 8:00pm ET. If your team coaches are unable to attend the webinar, it will be recorded and made available on our website. [Register for the webinar here.](#) We encourage teams to submit their questions in advance, by emailing ftcteams@firstinspires.org, with the subject line "Virtual Coaches Meeting."

Webcast

The live stream will be available on [FIRSTtv](#). Visit Twitch for airtimes and archives.

Wireless

Free wireless internet access is available in the common areas of the George R. Brown Convention Center. This access is not available on the Pit floor or in the playing field areas of the George R. Brown Convention Center. When in the pits and near the competition playing field, please switch off your Wi-Fi and personal hotspots to benefit robot performance.

Due to the wireless nature of FIRST control systems, wireless availability will be evaluated during the event. Teams will not be allowed to set up their own wireless networks at the Championship. 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.