

# STEM Gals/NTX Rules 2023

Updated 10/1/2023

**We believe that the TRI rule changes were just right and have adopted these changes. Thank you, TRI for allowing us use of their verbiage. STEM Gals & NTX Tournament of Robots 2023 will be using the FRC 2023 Charged Up rules except where noted below.**

## STEM Gals Drive Team Rules

1. Drive team drivers and operators must be females.
  - a. If there are not enough females for all of the drive team positions, a team may borrow members from other teams, or use male members if needed.
2. The drive coach may be either a normal season drive coach or a male driver from the normal season who wants to try the driver coach position.

## STEM Gals/NTX Rule Changes

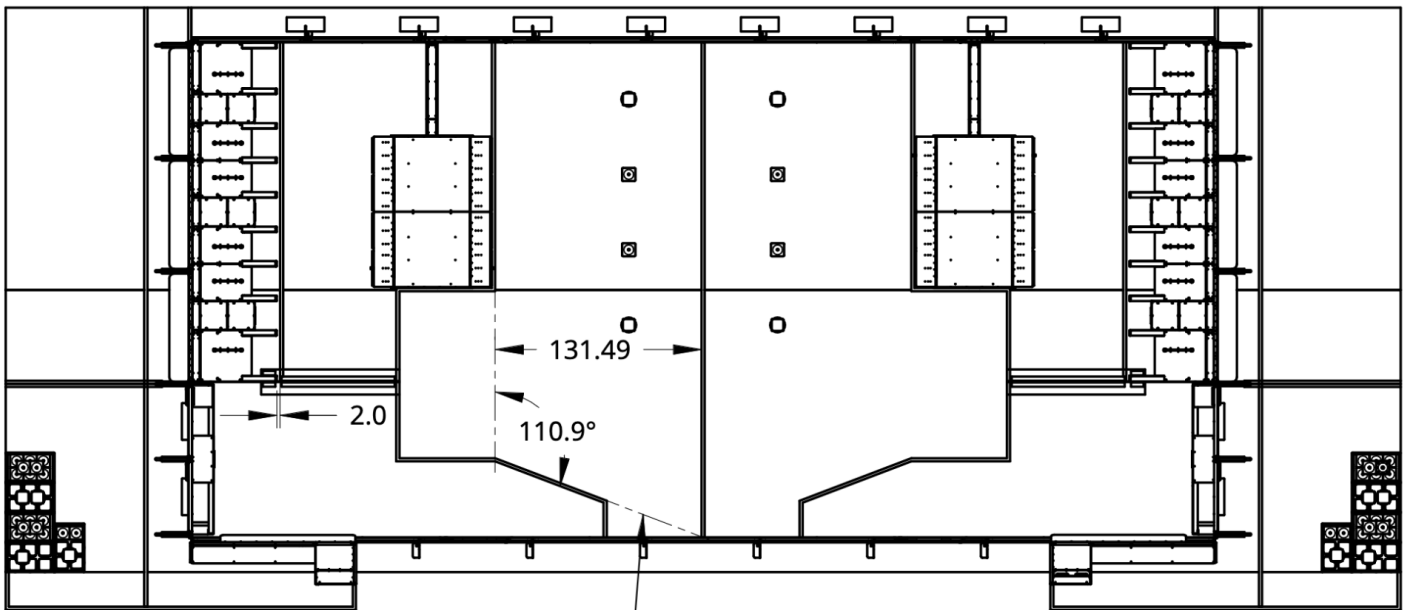
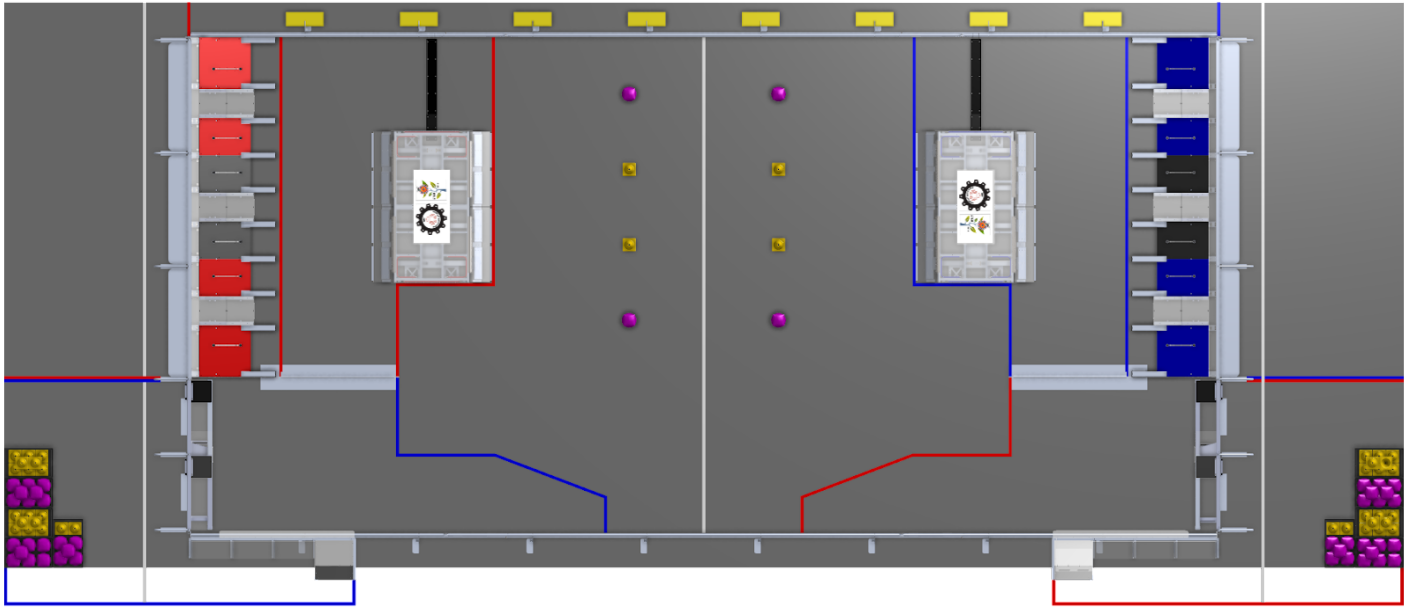
### Field Marking Changes

1. The Loading station will contain a chamfer. The tape line will be taped by
  - a. Mark a point 131.49" (334 cm) from the midline on the tape line, which runs parallel to the field border.
  - b. Draw a line from this marked point towards the midline and field border intersection, stopping where it meets the loading zone border.

We noticed that the loading zones were minimizing defense and causing unnecessary penalties. This solution keeps the depth of the loading zone that some teams take advantage of but eliminates the majority of unnecessary penalties.

2. The Hybrid node Depth has been increased by a Gaffer's Tape Width (~2in).

We moved the tape line next to the Hybrid nodes up by 2 inches to provide more space for scoring in the low nodes. The intent is to remove questionable scoring calls and provide more room for supercharging.



Line goes where midline and field border intersect

## 1. Game Rule Updates

All YELLOW and RED Cards are now at the discretion of the Head Referee. Minor non-match-affecting incidents will be given warnings before cards are given. Teams will not be punished for field staff giving them directions such as entering the field.

### **H202. Be reasonable with the Head Referee.**

Most situations will likely only require one or two people to talk with the Head Referee. Still, we aren't going to institute a rule that doesn't allow other drive team members (including adult drive coaches) to provide information or listen to the conversations. Please be mindful that the Head Referee makes the final decision on calls but may be advised by other referees and the Event Director (who replaces HQ at off-season events). Also, please remember that C1 is a rule, and the referee may give YELLOW or RED CARDS for any interactions that deem to be egregious. We are all working for the inspiration of our students. Be polite, reasonable, and respectful; we will all have a great event.

**The original H202 causes more issues than it solves and is often not enforced to the letter of the rule. We trust our volunteers and teams to be reasonable and act in good faith to get the best outcome for everyone involved.**

**H303.** Clothes/shoes are okay, and backpacks and items in your pockets or backpacks are okay if they don't violate the other rules stated in H303.

**Almost everyone has a phone in their pocket or bag and is wearing clothing, so it should be in the rules. You still can't use your phone or radio to communicate with anyone during the match or any of the other violations, but it's just weird that it's not clear in the rules that it's allowed.**

**H501.** COACHES and other teams: hands off the controls. A ROBOT shall be operated solely by that team's DRIVERS and/or HUMAN PLAYERS.

**Violation: TECH FOUL and Warning. Repeated/Extended: TECH FOUL and RED CARD.**

**Coaches may touch the driver station laptop to diagnose a problem with the robot but may not directly contact any controllers or operate the robot in any way.**

**G204.** \*Stay out of other ROBOTS. A ROBOT may not use a COMPONENT outside its FRAME PERIMETER (except its BUMPERS) to initiate *more than inconsequential* contact with an opponent ROBOT inside the vertical projection of that opponent

ROBOT'S FRAME PERIMETER. Contact with an opponent in an opening of their BUMPERS or the space above the BUMPER opening are exceptions to this rule.

**Violation: FOUL**

**G205.** \*This isn't combat robotics. A ROBOT may not damage or functionally impair an opponent ROBOT in either of the following ways *as a direct result of the contact*:

- A. deliberately, as perceived by a REFEREE.
  
- B. regardless of intent, by initiating contact inside the vertical projection of an opponent ROBOT'S FRAME PERIMETER. Contact between the ROBOT'S BUMPERS or COMPONENTS inside the ROBOT'S FRAME PERIMETER and COMPONENTS inside an opening of an opponent's BUMPERS is an exception to this rule.

**Violation: TECH FOUL and YELLOW CARD. If opponent ROBOT is unable to drive *as a direct result of the contact*, TECH FOUL, and RED CARD**

**For G204 and G205, Robots attempting to "play the game" (score a game piece, go in the direction of one of their protected zones, etc) will get the benefit of the doubt. In cases where referees are forced to make a judgment call regarding a destructive interaction between robots, or an interaction that results in a questionable rules violation, the referees will err on the side of robot's attempting to "play the game."**

**G301.** Be careful what you interact with. ROBOTS and OPERATOR CONSOLES are prohibited from the following actions with regards to interaction with ARENA elements.

**Violation: MATCH won't start until the situation is corrected. If during a MATCH, FOUL. If during a MATCH and REPEATED or *longer than MOMENTARY*, YELLOW CARD. If offense is via a ROBOT and the Head REFEREE determines that further damage is likely to occur, offending ROBOT will be DISABLE.**

## **2. +5 pounds weight allowance and no formal inspections.**

This allows repairs and minor modifications without major work to maintain 125 lbs. Robots may weigh up to 130 lbs. We also won't have inspections at this event; event staff may ask you to make modifications if your robot doesn't meet the FRC robot rules.

## **3. Alliance Selection**

- A. If we have more than or equal to 32 teams, The standard championship subdivision level alliance selection process will be used, including the 4 robots per alliance rules as outlined in the game manual. 1-8, 8-1, 1-8
- B. If we have fewer than 32 teams. We will use the standard 3-team alliance format from district/regional events.
- C. At the beginning of Alliance Selection, the Emcee will ask if any teams would like to withdraw from Alliance Selection. Any teams wishing to not play can withdraw at this time. After alliance #8 has made their first pick, teams are no longer allowed to decline invitations and all further picks will be assumed to be accepted.

## 4. Video Review

Given that the technology allows it (the video system doesn't go down, etc.), there will be a video review process.

- Each Alliance is allowed one challenge/review in the playoffs. The alliance captain will be provided a video review coupon.
- Video review coupons must be given to the head ref within 2 minutes after the end of a match for it to be reviewed.
- Only match-affecting calls and yellow/red cards can be reviewed.
- The score or lack of score being reviewed must be significant enough to affect the match's outcome. The Head Referee can choose not to review any call they do not believe will change the match's outcome.
- Video evidence must be indisputable to change a call. The point is to receive credit for a missed score, not to debate further a close call on which a referee already used their best judgment. The Head Referee's decision is final after a review.
- Only the head referee will use the event-provided video during a video review. Referees will not review any other video footage, including camcorders, phones, or tablets not provided by the event.
- At their discretion, the Head Referee may choose to review any ruling throughout the event. Please do not ask for a video review at any time other than giving the referee your alliance's video review coupon during the playoffs. All other requests will not be granted.

We don't plan on ever having this happen, but we want to provide the best event possible to teams; a video review of other situations may allow us to do this.

## **5. Soft Time Cap**

To allow teams to get out of the event in a reasonable amount of time if we have match delays, we will be instituting a soft time cap during the event. At the discretion of the event organizers, if Finals start after 4:30 P.M. Central Time, we will be moving to a “Best of 1” elimination format instead of the usual “Best 2 of 3” format for Finals.

## **6. STEM Gals & NTX Alliance Selection**

- A. The top 8 teams are not allowed to select each other. The selection sequence will be 1-8; 8-1; 1-8.
  
- B. Since alliance selection will be outside the top 8, teams will not be allowed to decline unless they cannot stay for playoffs.

## **7. Break Changes**

Due to the lack of awards, all pre-scheduled breaks in Elims have been reduced to 8 minutes long. This is to speed up the process.

This Rule isn't meant to rush teams with a broken robot on the field. If you need the full break, the full break will be given.