

Team 5472

Safety Handbook

2017-2018



STALLION ROBOTICS



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Report Your Injuries

As a member of FRC Team 5472, you are required to report every injury you experience in the lab or in the pit at the competition. You should report your injury to an adult or mentor. Failure to report an injury not only puts you or another student at risk, but also puts your mentors at risk. If they are not available, report it to your team's safety captain or team captain. Minor injuries can become major if not treated properly.

Personal Protection

Hands

Gloves are an important part of safety. They should be worn wherever you see this sign or something similar. They should be worn when using heating tools and chemicals as well as when moving crates, plywood or the robot. They should not have any holes or tears and must be approved for the current task. Remember, gloves could also pose safety issues if they are too loose or too snug. They should feel like they are an extension of your own hand.



Feet protection

Closed toe shoes must be worn at all times when around the robot or when working on any tools. Boots, sneakers, walking shoes, and loafers are fine. Remember that if you are wearing loafers, boat shoes or driving shoes there is a good possibility of metal chips going into your shoe from the top. Such chips can cause burns or even tetanus if they cut your skin.

Eye protection

Eye wear is an important part of personal safety. Goggles or safety glasses should be worn at all times when working with chemicals, on robots, with any tools, or when you are in the lab or the pit area.

ANSI-approved, UL Listed, or CSA rated non-shaded safety glasses are all acceptable . If you wear prescription glasses, there are

larger variants of safety glasses that you can wear. Safety goggles can not be reflective, your eyes need to be clearly visible



Hearing protection

Hearing protection should be worn when any tools that generate high decibel sound. If it makes more noise than your hair dryer, you should wear hearing protection. There are over ear and in ear types that can be worn depending on your requirements.

Headphones or earbuds are not allowed at any time and pose a major safety hazard. The safety captain can confiscate your headphones for the day should you wear them in the Pit or in the Lab.



Pit safety

Pit safety is extremely important and very simple. Pit safety is a matter of knowing what is happening around you and wearing your PPE (personal protective equipment). To enter the pit you must be wearing long pants, gloves, safety glasses, and must not have any hanging items such as necklaces, watches or bracelets. It is also important to make sure that the pit area is clear and clean. If too many people are in the pit some may need to leave make sure an accident doesn't happen. Communication is very important in the pit, it is less likely that an accident will happen if everyone knows where you are and what you are doing.

Hazards & violations

Rules

1. **Safety glasses are REQUIRED** to be worn at all times ANSI-approved, UL Listed, or CSA rated non-shaded safety glasses while in the arena or in the pits
2. **Open toe shoes are PROHIBITED** at all times when in the pits or arena
3. **DANGEROUS ROBOTS** and robot design that is deemed unsafe is not permitted to compete
 - a. Uncontrolled motion that cannot be stopped by the drive team
 - b. Robot parts flailing outside of the field
 - c. A robot that drags their battery
 - d. Robots that consistently extend beyond the play field
4. **WAIT FOR THE GREEN LIGHTS** Drive teams may only enter the field if the LED strings are Green, unless instructed by a referee or FTA
5. **NEVER STEP OR LEAP OVER THE GUARDRAILS** Drive teams may only enter or exit through the gates
6. **HUMANS STAY OFF THE FIELD DURING THE MATCH** Humans may not extend any body part over into the field during a match, and until the green LEDs are turned on

- 7. ROBOTS CAN NOT EXTEND OVER OR EXIT THE FIELD** Robots and any they may control, such as a power cube, can not have any contact with anything outside the field, except for the stops to the Portal wall
- 8. STAY OUT OF THE TUNNELS** Drive teams may not extend anybody part into the Return chute, Portal chute or the exchange tunnel
- 9. WIRELESS CONTROL IS ONLY ALLOWED ON THE PLAY FIELD AND PRACTICE FIELD**

Miscellaneous

Hanging items such as rope, wires, or cables can be safety hazards. They could be caught in someone's path and be attached to them. When in the pit or transporting your robot make sure that all loose items that could hang off the cart are properly secured along with any wires in the pit.

Ties, hanging keychains, loose hair, lanyards earbuds and jewellery can pose hazards in the lab. Especially near rotary or outlet powered machinery. Remember, you are to remove your ID badge in the robotics lab if it is on a lanyard, it poses a safety hazard. But you have to put it back on when you leave the lab.

Improper use of tools or machinery, can lead to serious injuries to not only yourself but others a well along the the robot itself. To avoid this, make sure you and all others members of your team are properly trained to use the tools or machinery you have.

Heated times such as glass or metal. It is impossible to tell if a piece of metal or glass is hot just by looking at it. If you touch or pick up a hot item it can cause burns. To make sure this doesn't happen have a laser thermometer or simply tell other members of the team that the item is too hot to touch.

Crowding. In the pit It is very easy for crowding to occur. Crowding is when too many people are working or are in the pit at any one time. It is important to make sure everyone knows who will be in the pit working, on drive team or scouting in the pit area. This will allow your team to work smoothly without crowding.

Communication on the team

Communication is very important when in the pits and in the lab. It helps to avoid confusion and accidents. It is of great importance to speak clearly while working. In diverse environments with many foreign individuals such as our school, putting things on simple terms makes it easy on all of the team members. As we are a team, teamwork in safety is also very important. If someone is in a position where they can't use all 5 of their senses, communicating changes in the environment can make a difference. For example, if a teammate is bending over to fix something on the robot, you should inform them if you open a drawer near them, they might hit themselves on the drawer when getting back up.

Safety meetings

Having a safety meetings at least twice a month is a great idea. It is important that all members, even safety officers get a refresher in safe practices. A simple meeting that covers things like as a fire escape plan, tool safety, and fire extinguisher locations use can be very beneficial. It is also very important that at least one of the mentors of the team is CPR and first aid trained.

Our Mission Statement

We here at team 5472 take safety as our number one priority. Above all else, it is safety that is most important. It is all members of the team responsibility to ensure that every member of the team, anyone visiting the Lab or in the Pit area, is safe and is aware of what's going on. All members have undergone a safety training program to insure that all members and visitors are safe, and have also gone through training in their chosen department. Safety at Team 5472 is our priority

