

CRYPTONITE ROBOTICS

SAFETY MANUAL

CONTENTS:

OVERVIEW.....	2
GOALS.....	2
RESPONSIBILITY.....	2
PPE.....	3
TRAINING.....	4
SAFETY IN THE WORKPLACE.....	4
TOOL SAFETY.....	4
BATTERY SAFETY.....	5
INJURIES.....	5
DOCUMENTATION.....	6
COMPETITION SAFETY.....	6
PIT AREA SAFETY.....	7

OVERVIEW:

The safety team works to ensure the safety of all team members at all times. We check that everyone follows the correct safety procedures and wears proper personal protective equipment. In addition, we look to rectify unsafe working conditions and keep everyone responsible for his or her own safety as well as the safety of other team members.

GOALS:

- No injuries
- Maintain a safe working environment to eliminate all hazards and prevent the possible occurrence of a hazard

RESPONSIBILITY:

Everyone is responsible for his or her own safety as well as the safety of other team members during meetings, builds, and competitions.

Students and Mentors:

Both parties are responsible for acting in a safe manner at all times, regardless of experience or comfort level with the task being performed. All students and mentors are to set an example for others through safe conduct.

- Protect your neighbors by keeping them informed of what you are going to do.
- Before beginning your work, make sure that you have the correct tools, personal protective equipment, and enough workspace.
- Always work safely and responsibly. DO NOT mess around or use tools inappropriately.
- Students: if you see any unsafe situation, be sure to tell a mentor or adult.
- If ANYONE gives you a suggestion for your safety, pay attention and correct the problem.

Safety Captain:

The safety captain works to ensure that all members are working safely in a safe and hazard-free environment. To achieve this, the captain has several responsibilities:

- Prior to build season, organize safety trainings to guarantee safe practice during the build season.

- Keep record of all members trained to perform specific tasks and train those who lack experience in safe tool usage and workspace safety. Perform daily safety audits, recording any discrepancies between the ideal working environment and the current environment.
- Keep detailed records of any injuries, major and minor, any accidents that occur, and any unsafe behavior.
- Monitor the build site for unsafe behavior or any possible hazards.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

All members of CRyptonite Robotics are required to wear the following PPE and adhere to the following rules at the build site and competition:

Eye Protection:

Members MUST wear safety glasses at all times when at the designated build site.

In general, safety glasses are required when dealing with anything involving flying particles or chemical exposure. They are also required at FIRST events in the pit, on the Playing Field, and on the Practice field. At competitions, safety glasses must be clear and un-tinted.

If you wear prescription glasses, you must still wear safety glasses over them or use proper side shields.

Shoes:

Members MUST wear steel-toed boots at all times when at the designated build site, during demonstrations, at FIRST events, and at competitions.

Clothing:

Do not wear any loosely fitting clothing. Members are required to wear jeans or long pants at all times when at the designated build site.

Hair:

Long hair MUST be pulled back when at the designated build site or in the pit area.

Hand Protection:

When dealing with springs, exceedingly hot items, exceedingly cold items, or working in places with the potential of pinching one's hands, gloves must be worn.

Ear Protection:

When "there are objectionable/questionable sound levels," ear plugs are always available for team use and are strongly recommended in such cases.

TRAINING:

All members of CRyptonite Robotics are required to be trained in safe practice in the workspace, in safe tool handling, and in emergency procedures.

Prior to build season, CRyptonite Robotics holds safety trainings for both new and returning members over topics including general safety in the workplace, hand tool safety, power tool safety, and emergency procedures. The team continues training as needed throughout the build season to ensure safe tool handling and maintain a safe workspace.

If you are not properly trained in a specific area, DO NOT ATTEMPT TO PERFORM A TASK IN THAT AREA. Consult the team safety captain or a team mentor so that they may ensure that you gain the knowledge necessary to safely complete the task.

SAFETY IN THE WORKPLACE:

Creating and maintaining a safe workplace is key in team safety.

- Ensure that all safety equipment is easily accessible
- Eliminate all slipping and tripping hazards
- Keep the workplace organized and neat, keeping all materials, tools, and safety equipment in the proper places
- Keep all exits unblocked at all times
- Ensure effective communication between all workers

TOOL SAFETY:

Utilize proper tool handling at all times. If you are not sure of how to use, properly trained in the usage of, or comfortable with using a specific tool, DO

NOT ATTEMPT TO USE IT. Consult the team safety captain or a mentor for proper use of the tools.

Always use the right tool for the job. Do not sacrifice this practice for efficiency or ease: use the proper tool.

(Detailed tool safety information is outlined in the “Safe Tool Handling” manual).

BATTERY SAFETY:

Be mindful of battery conditions at all times. Batteries contain powerful chemicals that, if not properly handled, could potentially cause serious harm.

- Always unplug batteries when not in immediate use.
- Batteries should be properly stored when not in use.
- Keep MSDS information visibly posted.
- Any battery that is damaged in any way should not be used.
- If one comes in contact with the corrosive battery chemicals, follow the injury procedures for minor/major chemical burns.
- Continually inspect batteries for any sign of damage to prevent damage to the workspace or to the worker.
- Keep all necessary battery handling items easily accessible in the event of damage to the battery.

INJURIES:

REPORT ALL INJURIES TO THE TEAM SAFETY CAPTAIN OR A TEAM MENTOR AS SOON AS AN INJURY OCCURS, NO MATTER THE SEVERITY. Him who is affected must stop everything and take immediate action.

Minor Injuries:

Minor Cuts/Scrapes—disinfect the area immediately. If bleeding persists, apply minor pressure to the area. Using an anti-bacterial ointment, apply a bandage of proper size over the cut or scrape.

Minor Burns (First or Second Degree)—run the affected area under cool water. If necessary, cover with a bandage of proper size. Do not puncture or disturb any blisters.

Chemical Burns (First or Second Degree)—immediately run the affected area under cool water and flush for fifteen minutes. Apply anti-bacterial ointment over the affected area and apply a bandage or gauze over the ointment. Do not puncture or disturb any blisters.

Major Injuries:

DO NOT LEAVE THE AFFECTED PERSON UNATTENDED.

Cuts (Deep wounds)—seek medical attention immediately.

Major Burns (Third Degree)—apply clean, dry gauze or other dressing over the burn. Seek medical attention immediately.

Chemical Burns (Third Degree)—seek medical attention immediately. Monitor the affected person for possible reactions that may affect the entire body.

Injury Reports:

An injury report should be filed after any incident occurs, major or minor. Accurately detail all portions of the incident: how it occurred, those affected, and how the injury was treated.

DOCUMENTATION:

Keep up-to-date documentation of all injuries.

As is Team 624 policy, fill out daily safety audits that detail the condition of the workspace. Make notes of any key observations about the condition of the build site or of worker actions.

Record any extremely unsafe practices that occur in the workspace, any severe hazards, and any near-miss occurrences.

COMPETITION SAFETY:

Safety glasses and steel-toed boots are required for all members of CRYPTONITE Robotics when in the pit area or on the playing field.

Always stay within the designated areas.

Always travel with a partner to ensure safe behavior and prevent any possible negative occurrence.

PIT AREA SAFETY:

The pit area rules **MUST** be adhered to at all time to prevent any mishaps and eliminate all possible hazards:

- Double and triple check that the robot is turned off before beginning work.
- Safety glasses and steel-toed boots are required at all times.
- Be aware of your neighbors. Alert them of hazards.
- Keep the pit clean and organized. Keep aisles clear.
- People not working in the pit should not be in the pit area.
- Store tools and batteries properly.
- Nothing in the pit should be higher than 10 feet off the floor.
- Watch out for the safety of others who are not on the team and who might not be familiar with CRYptonite safety procedures.
- Even if you are in a hurry, still take the time to ensure that you are working safely.