

1.1 Hackathon safety plan (*Emergency Procedures Response Plan*)

Emergency Procedures Response Plan

Ensuring a proper response plan to any possible emergency is key to ensuring our members remain safe throughout this hackathon. This section outlines our response strategy in the event of an emergency. A common step for all these procedures is ensuring all members review the department safety training (EHS002 and EHS112) and procedures listed for common laboratory emergencies.

1. General Response Plan

- a. The designated emergency leader for WB202 is Edward Lombo and the designated emergency for WB203 is Aleksey Goroshko
- b. For first aid incidents, first aid-trained leads (Aleksey and Kalli) and the department supervisors (Professor Farmer) will provide care
- c. An incident report will be written for any incident within 24 hours
- d. MSDS will be reviewed by the team to close any gaps in knowledge of the chemical hazards in the hackathon's chemical usage

2. Fire Alarm

- a. In the event a fire alarm is pulled, any electronics or equipment that is plugged into an electrical source will be unplugged if it is safe to do so
- b. WB203/202: Will evacuate through one of the two-door and proceed to the stairwell down the hall to the right of the lab
- c. WB215: Will evacuate the room and proceed to the stairwell near the chemical engineering undergraduate office, WB216
- d. Edward and Aleksey will lead the groups outside of the building and will do roll calls based on the in-lab sign-in and out sheet. The nearest exit to the lab is on the left side of the building and will be the lab's evacuation route.
- e. One lead present will leave with the back of the group to ensure all members in the lab are accounted for and no one is left behind
- f. WB216 will follow the same protocol with one of the supervising leads at the front of the group and one at the back
- g. Any members missing from the roll call will be informed to the fire department and supervisor present (Professor Chin or Professor Farmer) immediately and the next steps provided by the team will be followed
- h. The building will only be re-entered once permitted by the fire department
- i. If anyone has caught fire, the team will aid the victim in performing, "stop drop and roll" to smother out the flames. First aid treatment will be immediately done to treat any burns and assess their condition. 911 or 8-2222 will be contacted

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3. Major Spill

- a. A major spill may result from either spilling a waste container or the KOH solution
- b. The spill will be immediately reported to the supervisor and the leads overseeing the lab to take immediate action
- c. All members in the area will be asked to leave the area to prevent further spreading of the spill and to prevent possible injury/exposure to chemicals
- d. Spill kits will be used to contain the spill and neutralization agents will be used as part of clean up based on the composition of the liquid dropped
- e. If the spill cannot be contained or poses a significant risk for our team to treat/handle, 8-7000 or 8-2222 will be contacted and the room will be evacuated

4. Medical Emergency

a. Puncture Wound (Glass in Wound /No Glass in Wound)

- i. The wound will be rinsed out if the bleeding is not a major health concern for 15-30 minutes as recommended by the respective MSDS
- ii. If the bleeding is in a major area or if bleeding profusely, the team focus will shift towards applying pressure to the wound immediately to contain the bleeding
- iii. If the wound is small and treatable (no glass in the wound, clotted and not in a critical area such as the face, or torso), the first aid kit will be used and the appropriate first aid treatment will be performed
- iv. If the wound is critical, pressure will be applied and 8-2222 or 911 will be called.
- v. After any incident, the victim will be asked to seek a doctor to ensure the wound is properly cleaned/ treated well, especially if the wound resulted from contaminated glassware, is deep, on a sensitive area, etc

b. Inhalation

- i. The victim will be taken outside to fresh air and 911 or 8-2222 will be contacted for further consultation

c. Simple cuts, bruises, abrasions

- i. The victim will be taken to the first aid box and the appropriate care will be given (gauze, band-aid, etc)

d. Exhaustion

- i. This may result if the teams do not take breaks, lack of food, water etc. The first step to handling this incident is prevention. Leads will frequently call for breaks and do frequent checks in with each team.
- ii. If a person is suffering from exhaustion, they will be taken to WB215 to rest and will provided with additional food and water as necessary
- iii. If their condition worsens, 911 or 8-2222 will be called and the first aid responder will be near the victim in the event their condition becomes critical

e. Unconsciousness and Stopped Breathing

- i. A primary first aid responder will come to the scene and will perform CPR on the victim

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- ii. The primary responder will ask secondary responders or anyone nearby to get the AED, call 911, and support the CPR (counts, checking the victim's ABC,etc) as necessary
- iii. IN ANY CASE, 911 will be called immediately and only trained members of the team will be called to support
- iv. Supervisors will be notified immediately of the incident

5. Chemical Injury

a. Chemical Spill on Limbs (Hands, Arms)

- i. The victim will be taken to the nearest sink and the wound will be thoroughly rinsed for 15-30 minutes
- ii. Victims will be taken to the nearest hospital to assess their condition or 911 will be called if the victim's condition worsens after exposure

b. Chemical Spill on Body

- i. The victim will be taken to the safety shower immediately
- ii. Other leads will be asked to clear the area to let the member use the safety shower comfortably
- iii. The victim will tear off all contaminated clothing and will use the shower for 15-30 minutes
- iv. The victim will be taken to the nearest hospital or 911, 8-2222 will be called for a consultation on the next steps

c. Chemical Spill Into Eyes

- i. The victim will be taken to the nearest eye wash station
- ii. The victim will rinse their eyes for 15-30 minutes
- iii. The victim will visit the nearest hospital or 911, 8-2222 will be contacted for further consultation

6. Broken Glassware

- a. The area will be immediately cleared of all participants and any injured members will be given first aid by a trained member or supervisor
- b. The glassware will be removed with a dustpan and cut-resistant gloves will be worn during clean-up
- c. Any chipped or damaged glassware will be set aside for disposal and will not be used further

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Appendix A: WB203 and WB202 General Layout and Safety Devices

These maps contain the various safety equipment our team will discuss in the upcoming safety training session for the hackathon participants.

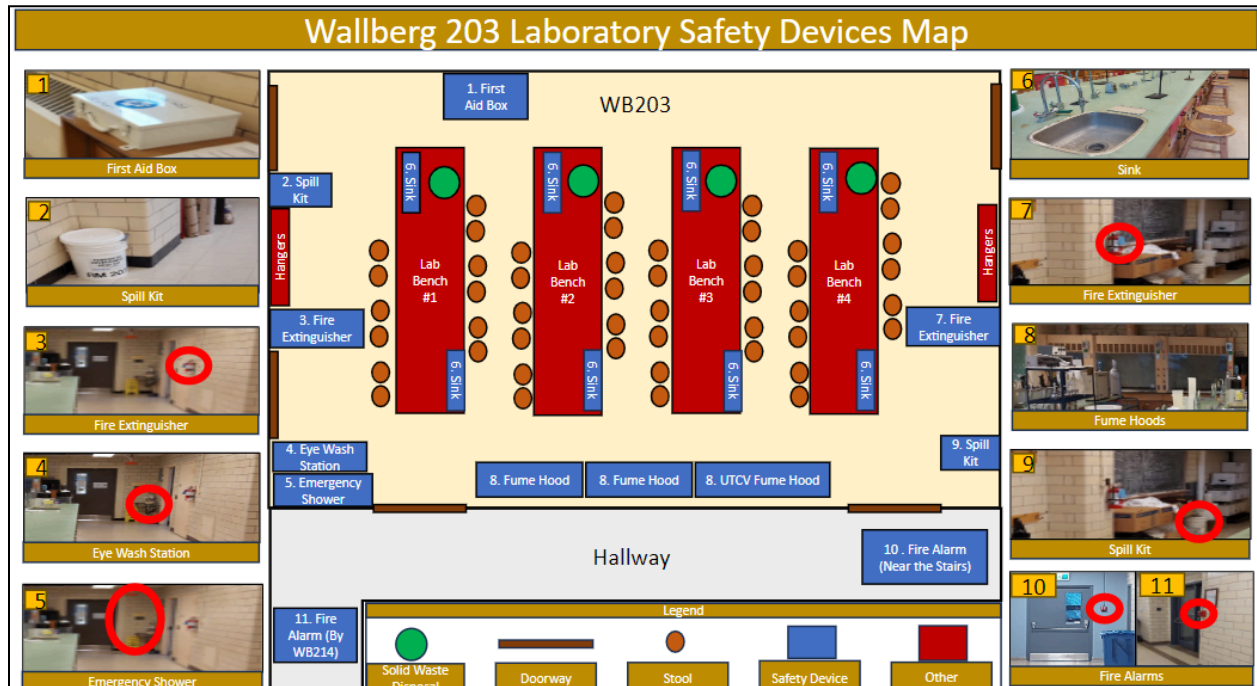


Figure 1: Wallberg 203 Safety Devices and Layout

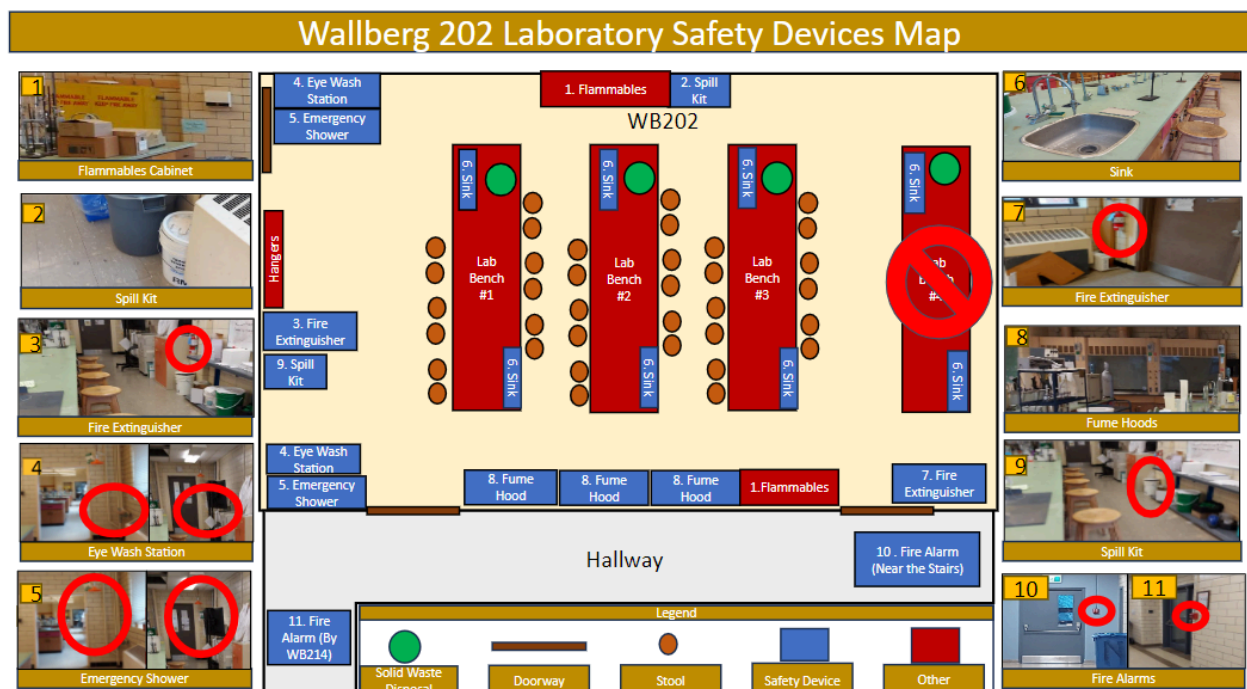


Figure 2: Wallberg 202 Safety Devices and Layout

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Appendix B: General Organization For The Lab

This appendix contains our team and station organization for WB202 and WB203.

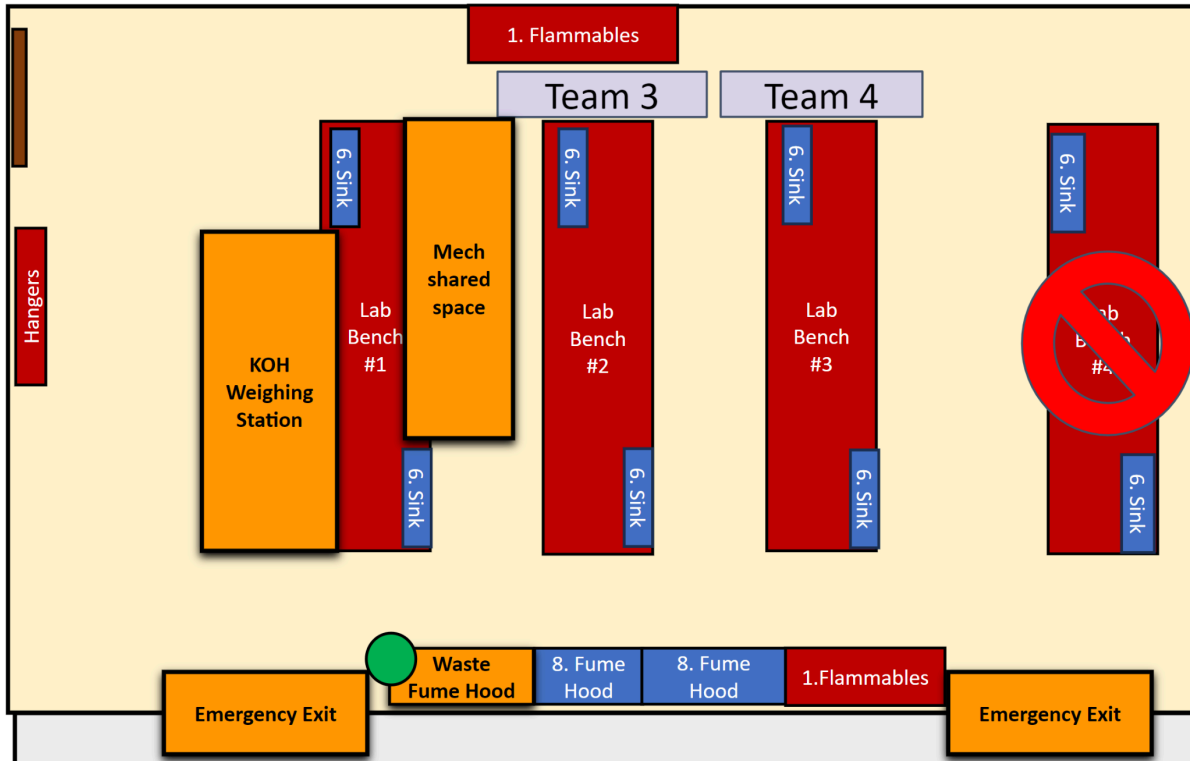


Figure 3: WB202 General Station Organization

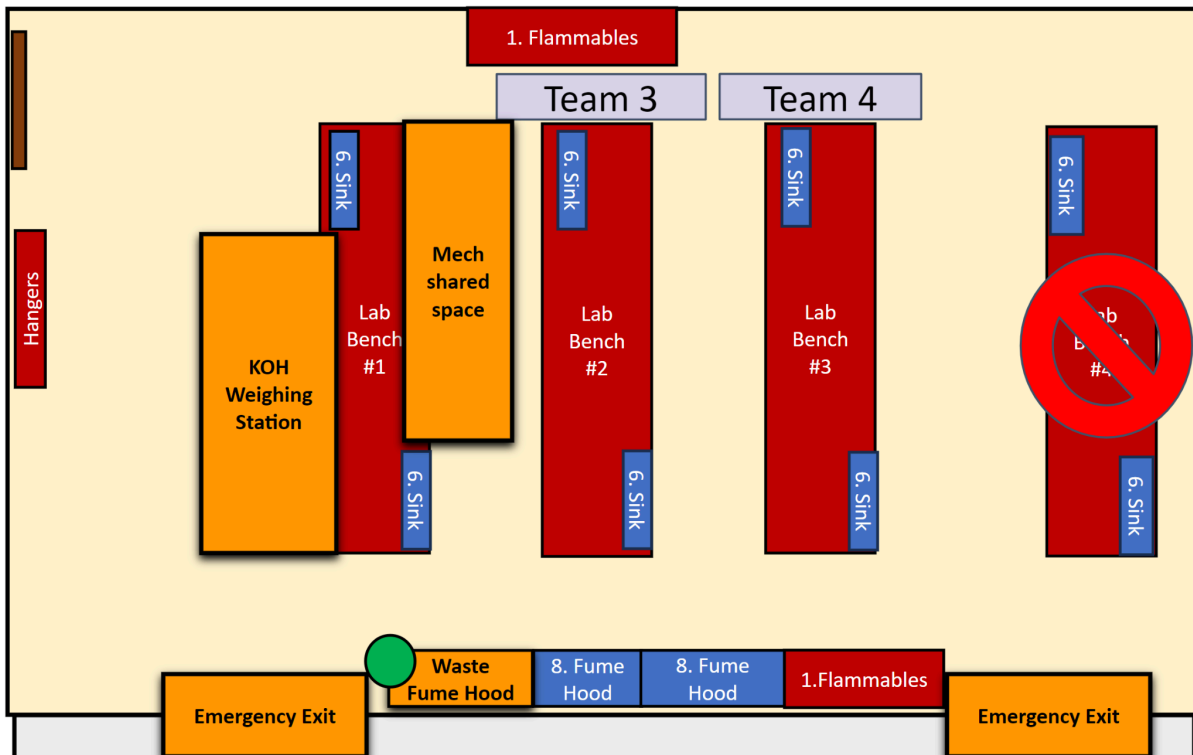


Figure 4: WB203 General Station Organization

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Appendix C. List of equipment available to each team

See Document “1.2 Apparatus list”