## Safety and Security Procedures and Policies in Elliott Hall

## Updated March 2019

Individual faculty members are responsible for the security of their teaching and research laboratories (labs) and for the safety of persons working in them but there are several standard policies and procedures that apply more generally. Most of these are common sense and they are typical of a professional practice of chemistry in most industrial, government and university settings. The procedures and policies listed below are a summary of the minimum standards that apply in the Chemistry Department at Acadia. It is probable that individual faculty members will have additional rules that are to be followed in their teaching and research labs because of special needs for the safe conduct of the work they are supervising. Any lab found not to be in compliance with these policies and procedures will be given one weeks' notice prior to being shut down until brought up to these standards.

**Responsibility:**

1. Responsibility for safety and security in Elliott Hall ultimately falls on the Head of the Department since the Head is also responsible to the Dean of the Faculty of Pure and Applied Sciences (FPAS) for proper management of the space in Elliott Hall.
2. The Head normally delegates direct responsibility for oversight of the safety and security to a member of the Chemistry faculty. This person (safety officer) is responsible for ensuring compliance with safety and security policies and procedures as well as for bringing deficiencies and suggestions for improvement to the Head.
3. Safe and secure storage of chemicals in the Department's stockrooms is the responsibility of the Department technicians. They are also responsible for maintaining an up to date inventory of the Department's communal chemicals and their locations. The technicians manage the collection and segregation of chemical waste and arrange for its disposal. Individual faculty members are responsible for ensuring that chemicals used in the teaching and research labs for which they are responsible are managed according to the current Chemistry Department procedures.
4. The names and telephone numbers of the persons responsible for the safety and security of individual labs must be posted on the laboratory doors. These persons have direct responsibility for ensuring that those who work in the labs comply fully with the general departmental safety and security policies and procedures as well as with any additional policies and procedures that are appropriate to the work undertaken in their labs.
5. The teaching assistants in undergraduate labs are responsible to the person having overall responsibility for the lab in which they are assisting.
6. Research personnel are responsible to their supervisor for the safe conduct of their work and for maintaining appropriate security and safety of the research labs in which they work.
7. All research personnel, faculty, teaching assistants and students are responsible for bringing up any concerns regarding health and safety or security with their supervisor or the departmental safety officer.
8. Safety inspections are to be completed four times annually. Three inspections are conducted by the person responsible for the lab, and one inspection is completed by the departmental safety committee.

**Building Security:**

1. Keys are issues to individuals and are not to be loaned to others. The individual to whom the key is issued is responsible for its proper use. In special cases, at the discretion of the Head of the department, a key may be issued for general use by a research group. In that case, the research supervisor is responsible for its proper use.
2. The person responsible for each laboratory must ensure that, on leaving the lab at the end of the normal working day:
    a. The master propane gas valve for the lab is turned off.
    b. All gas taps on the benches are turned off.
    c. All windows are shut and locked.
    d. The lights, projectors and fumehoods that are not required to be on for safety reasons are turned off/sashes closed.
    e. Chemicals and apparatus are stored away correctly, and the lab is left in a clean and professional state.
    f. All other equipment in the lab is left in a safe and secure manner.
    g. All doors to the lab are closed and locked.
3. No person is to be given access to Elliott Hall outside of normal working hours without authorization.
4. If someone is working alone in a lab in Elliott Hall outside of normal working hours (evenings/weekends) they must notify security when they arrive and depart.

**Fire/Other Emergency:**

1. In case of emergency, any faculty member teaching a class or lab is responsible for ensuring that their students evacuate the building in a safe and controlled manner. They are also responsible for verifying that all persons in the class or lab have been accounted for. The supervisor of each research lab is responsible for verifying that all persons in that lab are accounted for.
2. Evacuation will take place from the closest exit available depending on location in Elliott Hall. The three primary exits would be:
    a. North stairwell (facing Main Street/Acadia Arena)
    b. East (Main) entrance (facing University Hall)

    The muster station for all these exits is in front of Huggins Hall on University Avenue with a secondary location in the case of inclement weather being University Hall (entrance by post office). No one is to return to Elliott Hall until the University's Safety and Security personnel have determined it is safe to do so.
3. Faculty on each floor of Elliott also serve as Fire Marshalls to ensure evacuation of their nearby spaces.

**Power Loss:**

1. In the event of a power loss in Elliott Hall, emergency lighting will be active, and a calm and controlled evacuation must take place.
    a. Classes may be completed at the discretion of the instructor prior to evacuation. New classes will not commence if the power has still not returned.
    b. Laboratories must be evacuated immediately in the event of power loss due to fumehood shutdowns. Safely store chemicals in an efficient manner, close fumehood sashes, and evacuate to the designated muster station.

**General Safety in Chemistry Labs:**

1. Anyone handling chemicals in Elliott Hall (faculty, students, researchers, staff) must first complete the necessary safety training (WHMIS 2015 and site specific training).
2. All workers and students must always wear safety glasses/goggles and lab coats when chemicals are in use. Contaminated clothing such as lab coats should not be worn outside the lab.
3. Safety glasses/goggles must be worn at all times in a chemistry lab, whether or not chemicals are being actively used.
4. Contact lenses are not permitted in a chemistry lab.
5. All workers and students must wear appropriate footwear while working in a lab (no open toed/exposed feet).
6. Gloves are NOT permitted outside of the chemistry labs. No gloves are permitted in the halls/classrooms.
7. Transportation of chemicals between lab spaces should be done using properly sealing secondary containment containers for volumes exceeding 500 mL (i.e. solvent carriers).
8. Long hair must be tied back, loose clothing including scarves, neck ties and lab coats that are too large should not be worn in the lab.
9. Chemical refrigerators must have a label indicating “No Food or Drink” permitted.
10. Fire extinguishers, fire alarm pulls, emergency showers and eye wash stations, and electrical panels must remain unobstructed.
11. Gas cylinders must be properly secured. Cylinders must securely be fixed to a wall or object which itself is fixed to something immobile (i.e. a desk bolted to the floor). Each cylinder must be individually secured.
12. Chemical storage procedures: All chemical containers must be properly sealed and labelled following WHMIS guidelines. The amount of chemicals in a working area should be kept to a minimum. Flammables should be stored in flammable cabinets. Chemicals should be segregated with these minimum classes: Organic acid, Inorganic Acid, Bases, Peroxides, Flammables, Corrosives, Oxidizers, Highly Reactive, Poison/Extremely toxic, Low Hazard.
13. Never pipette by mouth.
14. Any incidents or accidents must be reported by the supervisor (of the research or teaching lab) using the Online Occurrences Report Form available on the chemistry safety website.
15. Sharps must be disposed of properly in a designated sharps disposal container, avoid re-sheathing syringes whenever possible.
16. Broken glass must be disposed of in the designated glass waste containers. Each lab should be equipped with these containers.
17. Oil baths are not to be left unattended while heating and should only use high flash point oils.
18. Only CSA-approved power bars may be used in outlets. All electrical cords must be organized and tied where possible to minimize clutter.
19. Chemicals spills should be cleaned by a qualified individual (custodial staff should not be asked to clean chemical spills).
20. 5L Solvent/chemical containers are the maximum size allowed in the chemistry labs, this includes containers for chemical waste. 20L Chemical drums are not permitted inside of Elliott Hall.

**Overnight Heated Reactions:**

1. Only essential reactions should be left overnight unattended.
2. Condenser tubing must be fully clamped to prevent flooring. Heavy wire, metal hose clamps or cable ties are acceptable. The water flowrate should also be reduced prior to leaving as the water pressure in the building may increase overnight.
3. The heat source for an overnight reaction must not involve an oil bath (see #17 above).

**Safety in Research Labs:**

1. Any person working in a lab in Elliott Hall when the building is locked must call to let security know which lab they are in and call again when they leave the building.
2. Undergraduate students must always be supervised while working in a lab and are never permitted to work alone.
3. Working alone by graduate students/researchers in a lab should be avoided if possible, but if necessary, ensure someone is aware that they are working alone and have this person check on them periodically. If working alone in a lab after hours, calling security is necessary (see 1.).
4. The faculty member responsible for a research lab must ensure that all appropriate safety precautions are followed for the work conducted in that lab.

**Safety in Teaching Labs:**

1. In those courses which have a pre-lab lecture component, students are not permitted into the lab unless they have attended the pre-lab lecture.
2. Teaching assistants are responsible for monitoring their students with sufficient care to help prevent accidents and ensure compliance to the safety rules.
3. Students who refuse to comply with the safety precautions in effect will be required to leave the teaching lab.

**Visitors:**

1. All visitors to the labs in Elliott Hall must be issued safety glasses and are not permitted to enter a lab without them on.
2. All visitors to the labs in Elliott Hall must be accompanied by a Chemistry Department technician or faculty member.