



All laboratories in the Department of Mechanical Engineering need the following basic safety elements in their laboratories:

1. Chemical Inventory
 - a. This is a list of all the controlled substances (as defined by WHMIS) under the stewardship of the professor concerned.
 - b. If you do not have any controlled substances in your laboratories, please state this on your chemical inventory and post this in the sleeve provided.
 - c. Signed and dated by the principle investigator.
 - d. A template for this inventory can be found on the MEC E safety website.
2. Material Safety Data Sheets (MSDS)
 - a. A binder available containing an MSDS for each controlled substance in the laboratory (printed MSDSs must be updated every three years)
OR
 - b. A computer with a printer available in the laboratory enabling researchers to print off the MSDSs as needed.
3. Hazard Assessment
 - a. The Alberta OHS Act, Regulations, and Code require that researchers complete a hazard assessment for their workplace, i.e., ALL laboratories. Once the hazards have been identified, the proper precautions must be documented in order to eliminate or mitigate these risks.
 - b. Performed on a regular basis for the laboratory space. This is especially important when new people or equipment arrive in the laboratory.
 - c. Examples of hazards (NOT complete):
 - i. Computer Laboratory
 1. Ergonomics (solution: proper workstations to reduce strain)
 - ii. Chemical Laboratory
 1. Toxic vapours (solution: lab users are trained to use best practices in chemical handling procedures that include using the fumehood available in the laboratory)
 - iii. Combustion Laboratory
 1. Burn injuries (solution: lab users are trained to use fire protective clothing such as gloves and coveralls)
 - iv. Wind Tunnel Laboratory
 1. Noise (solution: the proper hearing protection equipment is available - and new users have been made aware of this)
 - v. Optics Laboratory



1. Lasers (solution: the proper laser safety eyewear is available and users have been made aware how to use this safety equipment)
 - d. Both the hazard assessment template and instructions can be found on the MEC E safety website.
4. Working Alone Protocol
 - a. Outlines custom laboratory policies and procedures to mitigate risk after hours.
 - b. A template can be found on the MEC E safety website.
5. Chemical Spill Kit
 - a. This kit is supplied by the Department. If you work with chemicals and do not have a spill kit, please contact the shop at 492-3639.
6. 1st Aid Kit
 - a. This kit is supplied by the Department. If you do not have a safety kit, please contact the shop at 492-3639.
7. Fire Extinguisher
 - a. All laboratories should have a fire extinguisher.
 - b. Please notify the shop when an extinguisher has been discharged or the seal has been removed.
8. Telephone
 - a. All laboratories should have a telephone.