BIOSAFETY TRAINING REQUIREMENTS

Queen’s Biosafety Training Program

The Queen’s University Biohazard Committee requires that the Principal Investigator ensure that all personnel have both general and laboratory-specific training in the handling of biohazardous material.

The training program is designed:
1. so that training starts as soon as an individual joins a laboratory both for their personal safety and so that they can begin supervised work without waiting for a centralized course;
2. to provide centralized accreditation for biosafety training through the Department of Environmental Health and Safety (EH&S) to ensure that certain information is provided and understood;
3. to promote safety and regulatory compliance;
4. to demonstrate an element of “due diligence” in the institution; and to assist the laboratory should there be an inspection by a regulatory agency.

Training Requirements:

The employee/student may not work unsupervised with biohazardous materials until they have completed the Lab Specific training and the Queen’s Biosafety training requirements described below.

- After you have been trained, your Principal Investigator or the lab member who has been designated as the Secondary Biohazard Contact will request that you be noted as an authorized user of their biohazard laboratory.
- They will submit an email to the Biosafety Officer with information about your position and with an attestation that you must sign.
- Your attestation will indicate that you have been trained, and will follow the requirements of the Queen’s Biosafety program and the Biohazard Permit on which you are listed.

Undergraduate students who are working on a thesis or project for academic credit are not permitted to work unsupervised (and should not be given keys to the lab). They should still be trained about any hazards present in the laboratory and how these risks are mitigated.

Undergraduate summer students who are paid for their work are considered employees, are covered by different insurance, and may be given unsupervised access to the lab after they are fully trained, at the discretion of their supervisor.

Note – for each of the following ensure that you understand the material and that you have any questions answered by your Principal Investigator (or designate) or the University Biosafety Officer.

Laboratory Specific Biosafety Training

1. Work with your Principal Investigator or their designate to complete the New Employee/Student Safety Orientation Checklist. (www.safety.queensu.ca under the Biosafety dropdown menu)

2. The approved biohazard permit and amendments are key sources of biosafety information for work in the lab. The current version of documents must be readily available to personnel, either electronically or as a hardcopy.

- When reading the documents:
  - For any infectious agent or any material that might contain an infectious agent, take note of the symptoms of infection, the mode of transmission, effective
disinfectants and the recommended biosafety level.
• note any medical conditions that could make an individual more susceptible to the biohazard and inform your supervisor if you are at a greater risk so that measures can be taken for your protection.
  • Remember this information so that if your health status changes you will think to inform your supervisor.

• Read your Principal Investigator’s approved Biohazard permit form and the attached documents, including the risk assessment, the inventory, the lab specific training statement, and any lab specific biosafety related SOPs and complete any lab quizzes that may be required (e.g. a containment level 2+ quiz).

• Read any documents listed in the lab specific training statement.
  • This statement will specify which Queen’s EH&S Standard Operating Procedures (SOPs) apply to your laboratory (www.safety.queensu.ca under the Policies and SOPs dropdown menu).
  • If there are MSDS (called Pathogen Safety Data Sheet, PSDS) for infectious substances in your lab then read them (http://www.phac-aspc.gc.ca/msds-ftss/)

• Obtain required training through the EH&S website (see details below re Queen’s Biosafety Training)

• Obtain any recommended immunization and/or have serum antibody titers checked to confirm that you have responded to an immunization.

3. Locate the Emergency Response Protocol posted in the lab, read it, and learn what to do if you are exposed to a biohazard.

4. Obtain hands-on training in operational procedures for working with and disposing of biohazardous materials.
  • If a respirator (N95 or P100) is required then be fit-tested at EH&S.

**Queen’s Biosafety Training and Certification**

1) Learn the location of the links to Biosafety related material on the lab’s computer and/or install them on your own computer and become familiar with the Queen’s EH&S website as a source of information www.safety.queensu.ca.

2) Read the Queen’s Biosafety Manual (at www.safety.queensu.ca under the Biosafety dropdown menu) and complete the Queen’s Biosafety quiz that is based on the Manual. You will be required to have knowledge of different sections of the Biosafety Manual depending on which quiz you need to write.
   i) Write either the Biosafety – Level 1 quiz OR the Biosafety - Level 2 quiz as required. To determine which quiz to write see the page associated with the quizzes https://www.queensu.ca/safety/courses/bio.htm
   ii) A copy of the Biosafety certificate is to be kept by the supervisor with other training records.

3) If your lab uses unfixed human material then you are required to complete the on-line biosafety course through EH&S on Human Blood, Tissues, and Bodily Fluids and write the 20 question quiz (not just read the relevant SOP-Biosafety-08).

**Continuing Education and Refresher training:**
i) Annual retraining on your Emergency Response Plan/Protocol (ERP) is required by PHAC.
   a. Your ERP is posted in your lab and it should be updated annually, based on the
   b. We recommend that lab members do this retraining as a group, perhaps during a lab
      meeting, when the PI receives a notice that it is time to renew their Biohazard Permit.
      i. There is a question on the biohazard renewal application to indicate that this has
         been done.

ii) Containment level 2 labs must assess their training needs annually. This is a PHAC regulatory
    requirement.
   a. All personnel must be trained on any changes that are required.
      i. In practice most of the changes will be identified at the time of a biohazard permit
         amendment application and the retraining done then. Nevertheless, the assessment
         needs to be done annually by your Principal Investigator.
   b. There is a question on the biohazard renewal application to indicate that this has been done.

iii) WHMIS training must be refreshed annually. The refresher quiz can be found here:
     http://www.safety.queensu.ca/courses/

iv) Other courses or refresher quizzes related to biohazards may be offered in the future and may
    become a requirement for the work under your Biosafety permit. Your supervisor and lab
    secondary biohazard contact will be informed by email if such requirements are implemented.

Key Regulatory Biosafety Documents

The federal regulatory agencies, the Public Health Agency of Canada (PHAC) and the Canadian Food
Inspection Agency (CFIA) publish laboratory standards that anyone working with human, animal, or plant
pathogens (level 2 or higher) must follow.
   • There should be electronic access via a bookmark in your web browser in a biosafety folder, or a
     hard copy of the standards in the laboratory.
   • Note that the Queen’s Biosafety Manual and associated SOPs contain the operational requirements
     of the PHAC Canadian Biosafety Standards which apply to pathogens and toxins that affect human and
     terrestrial animal species, so that reading the Queen’s Biosafety Manual and the associated SOPs
     will fulfill the requirement to have read these documents for most users of risk group 2 pathogens.

For pathogens affecting humans or terrestrial animal pathogens:
     are available at: http://canadianbiosafetystandards.collaboration.gc.ca/cbs-ncb/index-eng.php

For foreign animal diseases, pathogens affecting aquatic species or for plant pests:
   • The applicable CFIA Containment Standards, are available at:
     http://www.inspection.gc.ca/animals/biohazard-containment-
     and-safety/eng/1300121579431/1315776600051

Training Documentation

Training must be documented and the documents retained in the lab or in the departmental office. Copies
of training certificates and also departmental or lab specific orientation checklists signed by the trainee and
the trainer must be retained for a minimum of 5 years (PHAC CBS section 4.10.10).