

## APPENDIX 2 - Recommended Lab Safety Training Topics

A = Topics for Generic WHMIS and Lab Safety Orientation as included in “*Basic Lab Safety and WHMIS*” Power Point presentation developed by the BCSC sub-committee on training.

B = Suggested Topics for Lab Site Specific Orientation by PI or qualified designate as included in “*Laboratory Safety Checklist for New Lab Personnel*”

TOPIC	Sub-topic	Training Option
WHMIS generic	MSDS	A,
	labeling	A
	Department specific implementation procedures - e.g. MSDS location , responsibilities	A, B,
Waste disposal	Chem	A, B,
	Biological	A, B,
Safe storage	flammable storage cabinet usage/locations	A,
	explosion proof fridge usage/location	A
Lab Hygiene	handwashing	A, B,
	Food consumption and storage	A, B,
Personal Protective Equipment	lab coats, gloves safety eyewear, footwear, etc.	A, B,
Respirators	determine requirement and describe program	B
Fumehoods/biosafety cabinets	Safe use and operation	A
Emergency Response	safety showers, eye wash, fire extinguishers, spill kits, 1st aid, 555, no caretakers do spill clean-up	A, B
Immunization	Requirements, needle-sticks and incident forms,	A, B
Incident Investigation	Reporting incidents and accident investigation,	A, B
Knowledge of Supports	EHSO, WHMIS coordinators	A
Knowledge of Supports	Safety Legislation – Due Diligence	A
Working Alone/Isolation	After hours- unattended operations ,Working alone protocols, personal safety	A/B
Site specific information relative to research project	chem/bio/rad/ other hazards	B
Hazard Signage	Departmental specific hazard signs	A, B

## Laboratory Safety Checklist for New Lab Personnel

- PI/Lab Supervisor should discuss the following statements/questions with the new lab personnel before they start work in the laboratory.
- When completed and all signatures have been obtained, the checklist should be submitted to and kept by the departmental office.

### Please Print

<b>Name:</b>	<b>Date:</b>
<b>Phone #:</b>	<b>Department:</b>
<b>Principal Investigator/Official Supervisor:</b>	<b>Building and Room #</b>
<b>Biosafety Permit #</b>	<b>Radiation Safety Permit #</b>

The questions on page three can be used as a template for discussion in conjunction with the questions below.

YES	N/A	STATEMENT/QUESTION	
		1	PI/Supervisor has discussed the nature of the research/project being conducted in the laboratory.
		2	PI/Supervisor has discussed hazardous components of the research including reference to the following as applicable.
			a. Chemical
			b. Biological
			c. Physical (including temperature, electrical, lifting/ergonomic, hi/low pressure, sharps)
			d. Radioactive
			e. Lasers or Radiation Emitting Devices (REDs)
		3	PI/Supervisor has identified the location of Material Safety Data Sheets (MSDS) and chemical inventories to the employee/student and demonstrated methods of access.
		4	Immunization requirements have been identified and offered if the employee will be working with/near vaccine-preventable human or animal pathogens or potentially infectious material. (Contact EHSO Occupational Health Coordinator (474-6438) if you require assistance with this risk assessment).
		5	PI/Supervisor has discussed the need for the employee/student to inform health care providers of the nature of the laboratory research during an accident or post-exposure medical visit.
		6	PI/Supervisor has reviewed the site-specific laboratory safety requirements with the employee/student, including working alone, personal lab hygiene and responsibilities for safety, site specific waste procedures, and emergency response contacts.
		7	Hazard assessment, use and limitations information concerning Personal Protective Equipment (PPE) required in laboratory has been reviewed and personnel have been provided with the appropriate personal equipment required (lab coat(s), safety glasses/goggles, gloves) and shown location of shared PPE (e.g. face shields, temp resistant gloves)
		8	Does the employee/student need a respirator? ( ) YES ( ) NO If yes, arrange for exposure evaluation, training and fit testing through the Environmental Health and Safety Office at 474-6633.

		9	Has the pertinent procedures for emergency response been identified to the employee/student for:
			a. Spills, Ventilation/fume hood failures, etc.
			b. Fire (Fire procedures and Fire Marshall identified?)
			c. Personal injury and/or medical emergency (First aid responders identified?)
			d. Accident/Incident reporting procedure
		10	Have all Safety and Emergency Equipment <b>locations and procedures</b> been identified to the employee/student?
			a. Emergency Shower
			b. Emergency Eyewash
			c. Fire Alarm Pull Station
			d. Fire Extinguisher
			e. First aid and Spill Kits
			f. Emergency Contact Phone #s
			g. Fume Hoods
			h. Biological Safety Cabinets (BSC)
			i. Flammable Storage Cabinets
			k. Others
		11	Have the site-specific waste procedures and locations of the Hazardous Waste Wall Charts (Lab waste, Biohazardous waste, Radioactive waste) been identified and explained to the employee/student:
			a. Solvents?
			b. Acids/bases?
			c. Radioactive material?
			d. Sharps/broken glass?
			e. Biohazardous material?
			f. Animal carcasses?
		12	Has the PI/Supervisor reviewed with the employee/student, the laboratory signage system and entrance requirements as indicated on the door? Contact EHSO 474-6633 for information on installation of door signage.
		13	If a radioactive material user, has the employee/student signed up for training with the Radiation Safety Office at 474-6633.
		14	If a biological material user, has the employee/student signed up for generic BSC and Biosafety training. Call 474-6633.
		15	All new lab personnel must view the "Basic Lab Safety and WHMIS" presentation and write and pass the test. WHMIS Coordinator signature below** indicates that this has been documented.
		16	<b>If radioactive material is being used in the lab, has the employee/student been added to the Radiation Safety Permit and registered for training. Call 789-3613</b>
		17	The new employee/student understands that the PI/official supervisor can/should be contacted at any time to discuss safety concerns.

**\*\*WHMIS Coordinator** \_\_\_\_\_

***The signatures below indicate that the above material has been reviewed with this employee/student and the employee/student agrees to follow the prescribed lab and departmental safety procedures:***

**Employee/Student** \_\_\_\_\_

**Principal Investigator/ Official Supervisor\*** \_\_\_\_\_

\*Official Supervisor is a person whose supervisory responsibilities are defined in their job description

### Discussion questions for PI and New Lab Personnel

1. What are the hazards for 2-3 of the most hazardous/toxic chemicals or solutions that you use?
2. What biological risk group 2 agents or potential infectious material do you work with?
3. What are the routes of transmission of any hazards associated with this biological material?
4. What are the symptoms of infection with this material?
5. Would work with this material require Hepatitis B or other immunizations? Has this been started?
6. How do you protect yourself **and your co-workers** while working with the materials listed in #1 and #2?
7. When your experiments require use of a chemical or biological material that you haven't used before, what steps do you take before using it?
8. Are your lab's working solutions, and your own, (other than saline, PBS, culture medium) labeled with completed, individual WHMIS labels?
9. You are working late in the lab and have a major spill of one of the hazardous materials you have listed in #1. What should you do?
10. Considering your project as a whole, what are the major points in your own work where a risk is encountered and how do you plan to contain these risks?
11. Do you have any comments about your current procedures that would enable you to work more safely that your department should consider?