Staff Orientation & Laboratory Setup Worksheet

Overview

All laboratories within University of Oregon are expected to maintain certain standards for the safety of laboratory personnel, the environment, and contractors or vendors. These safety regulations and standards can be found in but not limited to:

UO Chemical Hygiene Plan	https://safety.uoregon.edu/chemical-safety
UO Laboratory-Safety Guides	https://safety.uoregon.edu/laboratory-safety
UO Hazardous Waste Program	https://safety.uoregon.edu/hazardous-waste
UO Biosafety Program	https://safety.uoregon.edu/biosafety-program
UO Radiation Safety Program	https://safety.uoregon.edu/radiation-safety

Responsibilities

Environmental Health and Safety (EHS) will provide guidance on regulatory requirements for all laboratories. EHS will meet with new Principal Investigators (PIs) to introduce them to the health & safety policies and practices of the University of Oregon. This initial consultation is a key component of new faculty orientation; EHS is also always available for ongoing consultation.

Departments and Institutes are the responsible entities for ensuring that EHS is aware of new PIs, and that PIs are aware of and follow health & safety requirements.

Principal Investigators are the responsible entity for the management (including safety management) of their laboratory units.

Laboratory Directors, Managers, and Supervisors are responsible for implementing the safety practices within each laboratory, ensuring that proper personal protective equipment is available and in use, and ensuring that all laboratory personnel are adequately trained prior to performing laboratory work. See Appendix 1 for training recommendations.

All lab workers are responsible for following all appropriate safety practices of the lab and for reporting unsafe practices to the Laboratory Supervisor, Manager, or PI. All lab workers can contact EHS at any time for consultation on questions or concerns.

The following checklist is a brief guide on:

- Emergency Information and Emergency Equipment
- Signs and Postings
- Other Equipment
- Chemical Storage and Waste
- Biohazard/Infectious Waste
- Radiation
- Laboratory Audits
- University Environmental Health and Safety Training Requirements & Recommendations

Laboratory Safety Contacts

EHS Office (1715 Franklin Blvd)	Main line	346-3192	ehsinfo@uoregon.edu
Biosafety Officer	Laurie Graham	346-2864	lgraham@uoregon.edu
Chemical Safety Officer	Matt Hendrickson	346-9299	mhendric@uoregon.edu
Hazardous Waste Specialist	Sara Herring	346-2348	sherring@uoregon.edu
Laboratory Safety Officer	Laurie Graham	346-2864	lgraham@uoregon.edu
EHS Director & Radiation Safety Officer	Steve Stuckmeyer	346-3197	stuckmyr@uoregon.edu

PI Laboratory Move in Checklist

This list is a resource for PIs new to UO or relocating to a new space within UO.

PI date & initial when completed	Emergency information and emergency equipment
	1. Post Emergency contacts near all phones, and UO Emergency Procedures flipbook near door. Provide EHS with three emergency contacts – these will be used on laboratory door signage. **NOTE: Call 911 for all Emergencies** **Call UO Police (UOPD) at 6-2919 for non-emergency incident assistance**
	2. Have materials available to handle small spills which your laboratory is adequately trained to clean up. Keep spill kits, absorbent material (e.g., vermiculite, kitty litter, and absorbent pads), appropriate disinfectant for biological material spills, and personal protective equipment in a standard location within the lab. Consult with EHS before attempting to clean up large spills.
	3. Test the eyewashes located in your area when you move into the lab. Test the eyewashes once a week and document your test on a posting at the eyewash. Keep the area around the eyewash free from storage and other clutter.
	4. If a safety shower is located within the lab, check the inspection tag on the shower to ensure that it has been tested within the last year. Contact EHS if the inspection is not current or if the sticker is missing. Keep the area under and around the emergency shower free from storage and other clutter.
	5. Review the types of fire extinguishers available in the lab (i.e. Class A, B, C, D, K, or combinations). Are they adequate for the hazards associated with your work? Contact EHS with any concerns.
	6. Review the locations of all exits, eyewashes, safety showers, fire pull stations, emergency shut-offs, electrical breakers, spill supplies, and other emergency procedures with all lab staff. Use the Lab Specific Training Checklist to document this training, keep a record on file, and send a copy of the documentation to EHS.
Standard operating procedures, signs, and postings	
	7. Review the University's Chemical Hygiene Plan. It is required that this information be provided to your employees.
	8. Establish a Laboratory-Specific Chemical Hygiene plan that will serve as a training tool for new employees, a reference tool for existing employees, and a source of documentation for incidents, audits, and inspections. A template to facilitate this is found at https://safety.uoregon.edu/chemical-safety.
	9. Ensure the required laboratory hazards, emergency contacts, biosafety level, ionizing radiation, lasers, radiation, and other applicable information is posted on the signage at the entry door(s) to the laboratory. Contact EHS for signs and to evaluate door signage requirements.
	10. Label laboratory-grade refrigerators are marked "No Food or Drink Allowed." Stickers are available from EHS.
	11. Label domestic-grade laboratory refrigerators and microwaves "No Food or Drink Allowed" and "No Flammable Materials." Stickers are available from EHS.
	12. Label all staff food refrigerators and microwaves "For Food Only." Stickers are available from EHS.
	13. Check that all sinks have been posted "No Chemicals/Hazardous Waste Disposal." Stickers are available from EHS.

Equipment	
	15. Check that all laboratory fume hoods are functioning properly and have had airflow tested within the past year. Testing stickers are at lower sash corners.
	16. Check that any local exhaust needs have been met (e.g., HPLC or other equipment that may emit vapors or excessive heat).
	17. Check that all biosafety cabinets are working properly and have been certified within the past year. If you have moved a biosafety cabinet into a new space, it must be recertified prior to use, and decontaminated prior to move.
	18. Check that the internal gas connections in equipment are intact.
	19. Check that all electrical cords and plugs are in good repair.
	20. Check that all mechanical systems have guards on moving parts (e.g., pulleys on vacuum pumps).
	21. Check that all water cooling hoses are securely attached (with hose clamps). Water leaks present enormous problems for buildings.
	22. Ensure freezers, refrigerators, dry boxes, glove bags/boxes, and other equipment in common equipment rooms have an emergency contact list prominently posted.
	23. If floor model centrifuges were moved, arrange with the manufacturer or service contract provider to have them re-leveled and re-installed.
Chemical storage and waste	
	24. Check that necessary sharps, glass waste, hazardous waste, and biohazard waste disposal containers are available and properly labeled. Containers are available from Science Stores or EHS.
	25. Maintain an electronic inventory of all chemicals, solvents, and gas cylinders in your laboratory. You will also be given access to a central web-based database tool to aid with inventory management. Details are at https://safety.uoregon.edu/chemical-safety-assistant.
	26. Segregate liquid and solid chemicals into hazard classes using the Chemical Segregation Worksheet provided by EHS. Fisher, Baker, and other chemical manufacturers use color code systems for segregating chemicals. (Keep in mind that not all manufacturers use the same color code). This may help you to separate them according to hazard class:
	27. Properly store flammable liquids in flammable storage cabinets having self-closing doors. **Note: maximum flammable liquids storage allowed outside a flammable cabinet is 10 gallons per fire control area**.
	28. Acids, bases, and volatile toxics are stored in dedicated cabinets (and connected to local exhaust ventilation when available & appropriate).
	29. Secure all compressed gas cylinders. The laboratory must provide all necessary straps or chains. Restraints are required at 2/3 of cylinder height; restraints at the bottom are also recommended. Keep valve caps on whenever cylinders are not in use.
	30. Excess chemicals that are no longer wanted within your laboratory may be collected by EHS, stored, and checked out of a Chemical ReUse Library by all UO researchers (http://safety.uoregon.edu). Please query this library to see if its contents may fit your needs.
	31. Hazardous wastes are collected by EHS. Requests for hazardous chemical waste pickup are placed by calling 346-3192. Manage all Hazardous Waste in accordance with University Policy. Guidance is available on the EHS website.

Biohazard / Infectious Materials	
	32. An IBC Registration Form must be submitted to the Biological Safety Officer (BSO) for review and approval by the Institutional Biosafety Committee. http://safety.uoregon.edu/institutional-biosafety-committee
	33. Biosafety Level 2 training is available through EHS in the MyTrack system.
	34. Biohazard symbols will be posted or removed as determined by the BSO.
	35. Contact EHS to request biohazard waste boxes and liners, and for disposal of full containers.
	36. **Biohazard Sharps:** Place into a leak-proof, puncture-resistant, labeled sharps container. When the container is two-thirds full, close the lid, decontaminate the surface of the container with an appropriate disinfectant and place in biohazard bag-lined box for disposal. **Non-contaminated Sharps (including broken glassware):** Place in a labeled puncture-resistant container with a total weight of less than 20 pounds at time of disposal. Contact EHS for disposal of full containers.
Radiation	
	37. An Application for the Use of Radioactive Materials or Ionizing Radiation must be submitted to the Radiation Safety Officer (RSO) for review and approval by the Radiation Safety Committee. Request an application from EHS.
	38. Contact the Radiation Safety Officer for assistance with waste disposal.
	39. Individuals wanting to use radioactive materials or radiation producing machines must have appropriate authorization and training.
	40. Radiation Use Authorizations must be amended prior to using a new location or new radionuclide.
	41. Identify Radiation Survey (wipe test) locations on a lab diagram and provide to the RSO.
	42. Radiation Warning signs will be posted or removed by the RSO.
Laboratory audits	
	43. EHS periodically inspects laboratories for compliance with chemical, biological, and radioactive material regulations and other UO safety procedures. The lab is encouraged to use the EHS Self-Assessment Form to conduct inspections of their lab spaces to ensure compliance with requirements.
	44. Governmental agencies such as OSHA, DEQ, EPA, NIH, and others, may conduct inspections for compliance. There may be no advance notice of these inspections. Contact EHS **immediately** if a regulator visits your lab.

Appendix 1. EHS Training for Lab Members

Below is a summary of the training requirements for UO lab members. If you have questions on whether a particular training is applicable to your lab's research, complete the Hazard Assessment Tool to determine required courses for your lab members. Contact the Laboratory Safety Officer with any questions at x6-2864.

Training Class Summary	Affected Positions
Fire Extinguisher: Includes fire classification, extinguisher use, and hands-on training. Note: Not required for non GTF lab members.	Refer to position description
Laboratory Safety Training (in person): Includes an overview of common laboratory hazards, OSHA requirements, and GHS labeling of	PIs, GTFs, student, and lab staff
Laboratory Safety Training (annual refresher): Provides a refresher of the above information and any updates made to OSHA or GHS guidelines in the last year. May be offered online or in person.	PIs, GTFs, undergraduate, and professional
Bloodborne Pathogens Training: Includes information on specific pathogens, modes of transmission, PPE, terminology, disinfection techniques, and waste disposal. Annual refresher training required.	Those with exposure to human materials
Biosafety Level 2 Training: Includes information of preventing faculty, staff and students from exposure to biohazardous materials, and guarding against the release of biohazardous materials.	Lab members in BSL2 research labs
Hazardous waste generator training: Provides information of State, federal, and UO rules on hazardous waste handling, collection, and disposal.	Lab members that generate or handle hazardous waste
Laser Safety Training: Based on the American National Standard for Safe Use of Lasers (ANSI Z136.1-2007). The program's intent is to ensure the safe use of lasers in research and academics.	Lab members that fall under UO Laser Safety Program
Radiation Safety: This two-hour class will provide a basic understanding of radiation safety principles and practices and explain University procedures for research that uses radioactive materials.	Lab members working with radioisotopes
Respiratory Protection: This class covers the basics about the Respiratory Protection Program, including responsibilities, program functions, and how to obtain, care for, and use a respirator.	Lab members that utilize respirators
Shipping Dangerous Goods: Required for shipping materials regulated as Dangerous Goods (49 CFR Part 172 and IATA), e.g., listed/unlisted materials with hazardous properties, infectious substances, and dry ice.	PIs and lab members who ship these materials
Animal Occupational Health Training: Addresses zoonotic and allergen risks. EHS-provided for UO employees described in the Program Manual. PI provides training for volunteers and unpaid interns.	Individuals with exposure to research animals
CPR, AED, First Aid: Medic First Aid CPR, AED, and First Aid classes are offered only to University faculty and staff when required by position description. *There is a cost associated with this training.*	See position description for requirements
In House Emergency Plan Training: Training is given by knowledgeable lab staff to incoming members to provide safety related information specific to the new member's research laboratory.	All laboratory members
SOP Training: High hazard/highly specialized work requires written SOPs. New lab members who will use written SOPs need to be trained by a competent lab member.	Lab members using written SOPs for their work

Appendix 2. Lab-Specific Training Guide

This guide may be used to assist PIs/supervisors with lab-specific training for new lab members. Training records should be updated as new areas become relevant; initial and date next to checkboxes for training provided after initial date. Keep a copy of this document and send a copy to EHS.

PI:	Department:
Building:	Room:

Initial	Basic laboratory safety
	Review UO Safety Policy
	Review safe lab practices (proper attire, handwashing, no pets allowed etc.)
	Identify designated areas for food consumption/storage outside of the lab
	Review procedures for working after hours
	Review procedures for incident/accident first aid, reporting and applicable forms
	Emergency information: spills, injury, fire, and power failure
	Fire extinguisher and first aid kit
	Evacuation plans and Fire alarm pull stations
	Safety shower and eyewash locations and use
	Lab spill kit and Emergency procedures (wall flip-chart)
	Waste handling procedures (labeling, packaging, requesting pick-up)
	Chemical
	Radioactive
	Pathogenic/Biohazard and Carcasses
	Sharps (e.g., needles/razor blades), and uncontaminated glass waste
	Work involving chemical hazards
	Review of UO and lab-specific Chemical Hygiene Plans (CHP)
	Review location of Safety Data Sheets (SDSs)
	Review Chemical Inventory
	Review procedures for chemical procurement and distribution
	Storage (compatible storage, corrosives cabinet, flammable liquid storage cabinet, flammable liquid storage refrigerator, etc.)
	Location where certain procedure(s) may be performed (e.g., fume hood)
	Personal protective equipment
	Discuss required PPE for various lab work, plus additional PPE for specific tasks
	Review selection and proper use of gloves (& manufacturer's guidance)
	If a respirator is required for work, arrange for evaluation, training, and fit testing
	Housekeeping, maintenance, and inspections
	Discuss materials stored or frequently present on the floor
	Discuss maintenance of scientific equipment
	Review maintenance of lab's safety equipment: weekly flushing of eyewash, checking fire extinguishers monthly, monitoring gauges on fume hoods, biosafety cabinets, keeping safety showers and electrical panels accessible, etc.)

Initial	Exposure monitoring/medical surveillance
	Discuss PEL and TLV for chemicals in use and how to reduce employee exposure
	Discuss use of fume hoods, biological safety cabinets or other mechanical ventilation systems
	Review criteria for medical surveillance, as found in the UO Chemical Hygiene Plan
	Discuss the need for employee to inform health care provider of hazardous substances used in the lab, particularly in instances of immunocompromised status
	Working with pathogenic or recombinant/synthetic materials
	Review standard microbiological practices; use of biosafety cabinet if applicable
	If work involves human blood, other human-derived or non-human primate derived materials, contact BSO to enroll in Bloodborne Pathogens Program
	If recombinant or synthetic DNA is used, review procedures for spills, exposures, and reporting requirements
	Review UO Biosafety Manual and lab-specific biosafety manual for BSL-2 labs
	Working with radioisotopes
	Contact Radiation Safety Officer for enrollment into program
	Review Radiological Safety Manual
	Review Dosimetry Program
	Working with animals
	Contact Animal Care Services for animal handler training
	Contact Biosafety Officer for occupational health training
	Complete and submit Medical Questionnaire to University Health Center
	Additional lab-specific hazards
	Review applicable topics such as liquid nitrogen, lasers, controlled substances
	Discuss ongoing laboratory training (e.g., review of incidents/accidents/injuries and how to prevent recurrence)

I certify the above items have been reviewed with me and I agree to take responsibility for maintaining a safe laboratory environment.

Lab member's signature: _____ Date: _____

Supervisor's signature: _____ Date: _____

INCIDENT RESPONSE

EMERGENCY 9-911

URGENT (Campus Dispatch) 346-2919

BE PREPARED — BE SURE YOU KNOW

WHERE YOU ARE LOCATED: _____
NEAREST TELEPHONE:

FIRST AID KIT LOCATED: _____

SAFETY SHOWER/ EYEWASH: _____

FIRE EXTINGUISHER: _____

FIRE BLANKET: _____

FIRE ALARM PULL STATION: _____

NEAREST BATHROOMS: _____

SPILL KIT LOCATION: _____

SDSs LOCATED: _____

EVACUATION ROUTES: _____

INJURY REPORTING PROCEDURES:
http://safety.uoregon.edu/risk-management