



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 | 541-346-3192 | ehsinfo@uoregon.edu |
| Biosafety Officer | Laurie Graham | 541-346-2864 | lgraham@uoregon.edu |
| Chemical Safety Officer | Ben Bythell | 541-346-0371 | bythell@uoregon.edu |
| Hazardous Waste Specialist | Seth Sponcey | 541-346-2348 | ssponcey@uoregon.edu |
| Laboratory Safety Officer | Laura Taggart-Murphy | 541-346-0616 | ltaggart@uoregon.edu |
| EHS Director & Radiation Safety Officer | Steve Stuckmeyer | 541-346-3197 | 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 <u>three</u> emergency contacts – these will be used on laboratory door signage PI, lab manager, facilities manager) <p style="text-align: center;">NOTE: Call 911 for all Emergencies Call UO Police (UOPD) at 541-346-2919 for non-emergency incident assistance</p> |
| | 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 <u>Chemical Hygiene Plan</u> . 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 Chemical Disposal in Sink." 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 submitted online through EHS Assistant. 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. Review UO Biological Safety Program Manual prior to working with any type of biohazards. Prudent lab practices and techniques are outlined including acceptable waste disposal procedures. |
| | 34. Biosafety Level 2 training is available through EHS in the <u>MyTrack system</u> . |
| | 35. Biohazard symbols will be posted or removed as determined by the BSO. |
| | 36. Contact EHS to request biohazard waste boxes and liners, and for disposal of full containers. |
| | 37. 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 red, 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 | |
| | 38. 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. |
| | 39. Contact the Radiation Safety Officer for assistance with waste disposal. |
| | 40. Individuals wanting to use radioactive materials or radiation producing machines must have appropriate authorization and training. |
| | 41. Radiation Use Authorizations must be amended prior to using a new location or new radionuclide. |
| | 42. Identify Radiation Survey (wipe test) locations on a lab diagram and provide to the RSO. |
| | 43. Radiation Warning signs will be posted or removed by the RSO. |
| Laboratory audits | |
| | 44. 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 <u>EHS Self-Assessment Form</u> to conduct inspections of their lab spaces to ensure compliance with requirements. |
| | 45. 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.

| Training Class Summary | Affected Positions |
|---|---|
| Fire Safety: Includes fire classification, extinguisher use, and firefighting policy. Note: Not required for non GTFF 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. OSHA requires annual refresher BBP training. | 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. <i>There is a cost associated with this training.</i> | 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 |



Laboratory Safety Training Worksheet

What? This document outlines EHS training classes available to personnel working in a lab setting. You are required to take all trainings from the list below that apply to your position. Fill this document out with your PI/Supervisor to determine which trainings apply; see the reverse side of this document for a summary of each training.

Who? Principal Investigators (PIs), lab supervisors, research personnel, graduate students & undergraduate students in laboratories.

Please find the listing of all EHS training courses online at uomytrack.pageuppeople.com.

| Training Requirement | Necessary for your position | | Provided By | Frequency | Date Completed |
|---|------------------------------|-----------------------------|-------------|---|----------------|
| Fire Safety | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Initial | |
| Laboratory Safety Training | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Initial | |
| Laboratory Safety Training Refresher | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Annual | |
| Bloodborne Pathogens Training | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS online | Annual | |
| Biosafety Level 2 Training (optional) | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS online | Initial | |
| Hazardous Waste Management Training | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Initial | |
| Laser Safety Training | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Initial | |
| Radiation Safety | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Initial | |
| Respiratory Protection | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Annual | |
| Shipping Dangerous Goods (as needed) | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | 2 Years | |
| Animal Occupational Health & Safety | Yes <input type="checkbox"/> | No <input type="checkbox"/> | EHS | Initial | |
| CPR, AED, First Aid | Yes <input type="checkbox"/> | No <input type="checkbox"/> | SRC | 2 Years | |
| Lab Specific Training (in house) Instructor: | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Laboratory | Initial | |
| SOP Training: Instructor: | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Laboratory | Initial, when SOPs are changed | |
| SOP Training: Instructor: | | | Laboratory | | |

Once all required trainings are completed and the training dates are recorded in the table above have your supervisor sign below. Save this document as a record of your safety trainings.

Lab member name (printed) _____ Signature: _____

Supervisor Signature: _____ Date: _____



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 <u>UO Safety Policy</u> |
| | 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 <u>forms</u> |
| | 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, <u>requesting pick-up</u>) |
| | 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 <u>Chemical Hygiene Plans</u> (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 <u>evaluation, training, and fit testing</u> |
| | 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 <u>Bloodborne Pathogens Program</u> |
| | If recombinant or synthetic DNA is used, review procedures for spills, exposures, and reporting requirements |
| | Review <u>UO Biosafety Manual</u> and lab-specific biosafety manual for BSL-2 labs |
| Working with radioisotopes | |
| | Contact Radiation Safety Officer for enrollment into program |
| | Review <u>Radiological Safety Manual</u> |
| | Review <u>Dosimetry Program</u> |
| 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, <u>lasers</u> , <u>controlled substances</u> |
| | 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 911

URGENT (Campus Dispatch) 541-346-2919

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>