

Princeton University

Lab Specific Safety Training

Per University policy, all individuals conducting work in Princeton University laboratories, paid or unpaid, including faculty, staff, students and visitors, **must** attend Laboratory Safety Training provided by Environmental Health and Safety (EHS). Attendance at similar laboratory safety training provided by other institutions does not satisfy this requirement.

Additional training provided by EHS is required depending on the activities of the laboratory worker. Such training may include laser safety, radiation safety, biosafety or other topics.

The training sessions provided by EHS give an overview of universal safety procedures for working with hazards that may be encountered in the lab. It is generalized and does not cover safety items specific to each lab. As part of normal interactions with laboratory workers, lab supervisors must ensure they are trained in the safe and proper practices for the procedures and materials they use and any lab-specific safety measures they may take to protect themselves from exposure to hazardous materials, including the location and use of emergency equipment.

Laboratory supervisors should conduct a risk assessment of the equipment, materials and processes in the lab to identify the lab-specific training needed for each individual. There are many resources available to help with this assessment, including, but not limited to:

- Principal Investigators and lab supervisors
- Departmental Safety Managers
- Departmental Chemical Hygiene Officers
- EHS personnel
- Online resources (i.e., www.princeton.edu/ehs)
- Procedural safety literature

All new lab workers are required to receive lab-specific safety training from their Principal Investigator, lab manager or other designated experienced researcher¹. Emergency procedures and general lab safety procedures must be covered immediately when the new person joins the lab. Other items can be covered as the new researcher begins that procedure.

Please note that such procedures do not necessarily need to be in writing. However, documentation that the individuals have been instructed and/or evaluated on the topics or procedures is needed.

Additional training may be necessary as new equipment, materials and/or processes are introduced.

¹ An *experienced researcher* is a laboratory employee, graduate student or post-doc who has received Laboratory Safety Training provided by Environmental Health and Safety and any other training deemed necessary by the Principal Investigator for the work being conducted, per Environmental Health and Safety protocols.

Lab Specific Training Record

Researcher Name: _____ PU NetID _____

Principal Investigator _____ Lab Location _____

Position/Title _____

Status: Faculty Staff Post-Doc Princeton Undergraduate Princeton Graduate Student
 Visiting Student Visiting Researcher High School Student

Supervisor Name: _____ Date: _____

The person providing instruction should initial and date each item when the topic is covered. Items that do not apply to the lab or the researcher should be marked "NA." After all of the relevant training has been completed, have the new lab worker sign and date this form and save it in your laboratory training records.

Initials&Date	Topic
	<i>Emergencies</i>
	Reporting procedures for medical, fire or safety emergencies
	Basic building alarms, response to alarms
	Emergency Action Plan including: exits, evacuation routes and designated meeting locations
	Location of emergency equipment such as eyewash stations, fire extinguishers, fire pull stations, safety showers, etc;
	Reporting requirements for laboratory incidents and accidents, especially relating to personal injury
	Location and use of spill kit, first aid kit
	Location of emergency contact information, including Public Safety (911 or 258-3333)
	<i>General Lab Safety</i>
	Proof of attendance to Laboratory Safety Training provided by Princeton University EHS
	Process for raising and addressing health and safety concerns in the lab
	Food and beverages are not to be consumed in laboratories. Locations to store food and drink, and the appropriate designated areas to eat.
	Protocols for transporting chemicals and other hazardous materials in hallways, e.g., use of secondary containers, no transporting in personal vehicles, etc.
	Lab security requirements (e.g., locked doors, access policies, etc.)
	Protocol for removing PPE when outside of the laboratory, except when transporting hazardous materials (e.g., do not wear gloves in hallways, elevators, etc.)
	Location of stored personal protective equipment (PPE: gloves, glasses, lab coat)
	When to use PPE, including proper eye protection, for specific tasks
	PPE work practices (i.e. closed toed shoes, lab coats buttoned, disposable gloves, wash hands after removal of gloves, removal of lab coats before leaving the lab, etc.)
	Hazards and proper use of compressed gases and cryogenic material, including moving cylinders, how to secure cylinders, procedures for attaching and removing regulators, etc.
	Proper handling and disposal of broken glass, razor blades, needles, syringes or other sharps

Initials&Date	Topic
	<i>Chemical Safety</i>
	Location and access instructions for a copy of the laboratory chemical inventory, Chemical Hygiene Plan, and other safety information
	Material Safety Data Sheets (MSDS) access and use
	Methods and observations that may be used to detect the presence or release of a hazardous chemical in the lab (e.g. odor, monitoring equipment, or visual appearance) and what action to take if detected.
	Hazardous chemical labeling system used in the lab
	Specific use of laboratory hoods and other engineering controls
	Chemical storage procedures
	Location of chemical waste containers, use, labeling and compatibility (Hazardous waste management and disposal procedures)
	Chemical spill procedures, including spill kit location, cleanup and reporting
Applicable? <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>Biological Safety (BSL2 Materials and Recombinant DNA not Exempt from the NIH Guidelines)</i>
	Proof of attendance at Biological Safety Training
	Proof of attendance at Bloodborne Pathogens Training
	Proof of attendance at Live Virus Worker Training
	Identification of all biological hazards in laboratory
	Institutional Biological Safety Committee review of recombinant DNA and infectious agents prior to use in the lab
	PI-approved use of sharps when working with infectious agents
	Review of protective equipment specific to the biological hazard(s)
	Personal Hygiene Procedures (hand hygiene, no eating and drinking in the lab)
	Review tasks that should be conducted in a biological safety cabinet
	Signs/ symptoms associated with infections that could be caused by exposure to agents handled in the lab and procedures for reporting suspected laboratory acquired infections
	Operation and use of lab equipment and decontamination methods
	Medical waste handling, including sharps disposal and disinfection of waste materials containing viruses, bacteria or other agents that could cause infection in humans
	Proper use of autoclave
	Biological material spill procedures, including cleanup and reporting
Applicable? <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>Radiation Safety</i>
	Proof of attendance to Princeton University Radiation Safety Training for Open-Source Users, as required.
	Proof of attendance to Princeton University Radiation Safety Training for Contained-Source Users, as required.
	Proof of attendance to Princeton University X-Ray Safety Training, as required.
	General awareness of radiological hazards, signs and symbols used in lab
	Radiation Safety Officer name and phone number
	Radioactive materials spill or release procedures, including cleanup and reporting
	Protocol-specific training needed to perform the laboratory's radioisotope procedures.
	Specific training needed to utilize analytical X-Ray equipment
Applicable? <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>Laser Safety</i>
	Proof of attendance to Laser Safety Training provided by Princeton EHS
	General awareness of laser hazards, signs and symbols used in lab
	Type of hazards for specific lasers, e.g., eye, skin, ignition of flammable materials, etc.
	Laser Safety Officer name and phone number

Operating Procedures and Higher Hazard Materials

List the processes or specific chemical or materials that may present an elevated risk of serious injury or property damage. Review the precautions, safeguards and procedures associated with these materials or processes. Examples include, but are not limited to:

- Highly toxic metals, such as arsenic, lead, barium, etc.
- Hydrofluoric acid
- OSHA-defined particularly hazardous substances²
- Nanomaterials
- Pyrophoric, explosive and water-reactive materials
- DEA controlled substances

Procedure/Material	Initials/Date Orientation	Initial/Date Proven Proficiency	Comments on working alone, supervision and/or PI approval

Your signature confirms that all items noted in this document have been communicated during a training session administered by the Principal Investigator or Laboratory Trainer and that you had the opportunity to ask questions.

Researcher Signature _____ Date _____

Training reviewed by: _____ Date: _____

² OSHA defines *particularly hazardous substances* as carcinogens, reproductive toxins and substances with a high degree of acute toxicity. For more information, see section 7J of the *Laboratory Safety Manual* at <http://web.princeton.edu/sites/ehs/labsafetymanual/sec7j.htm>