

**University of Washington
Department of Physics**

HEALTH AND SAFETY PLAN

Revised August 2004

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DEPARTMENT OF PHYSICS HEALTH & SAFETY PLAN

A. INTRODUCTION:

1. Scope:

The policies and procedures described here apply to all employees of the Department of Physics of the University of Washington. Employees may fall into one or more of the following site-specific safety categories: Office workers (including lecturers/demonstrators) laboratory workers, shop workers, or teaching assistants (T/A's). Safety procedures for non-departmental UW employees (Physical Plant workers, custodians, etc.) are not included as a part of this plan.

2. Health and Safety Policy:

The aim of this Health and Safety Plan is to provide a safe, healthful and efficient work environment for all, including faculty, staff employees, students, and visitors to the Department of Physics.

3. Responsibility:

The Chair, Supervisors and Principal Investigators (P.I.) are responsible for maintaining safe work practices in their respective domains, including required health and safety training

The Department of Physics requires all employees to comply with health and safety regulations, with departmental policies and procedures that apply to their own conduct on the job, and to report accidents, injuries, and unsafe conditions to their supervisor.

4. Safety Coordinator:

The chair of the Department Safety Committee is the designated Safety and Health Coordinator for the department and has been given adequate authority to carry out the following responsibilities:

- Auditing compliance with this Health & Safety Plan
- Updating this Plan, at least annually
- Coordinating with Environmental Health & Safety
- Working with supervisors and employees to resolve safety complaints
- Keeping safety bulletin boards current
- Maintaining safety records
- Keeping the department head aware of current safety concerns.

B. FUNDAMENTALS:

The following seven fundamental health and safety items apply to all employees of the Physics Department:

1. **New Employee Safety Orientation:**

It is the responsibility of Faculty, Staff and P.I.'s to ensure that all new employees under their supervision, including those that are permanent, temporary, or part-time, complete the Departmental New Employee Safety Orientation. This must be completed within the first week of employment and the completed form filed in department records. Copies of the Departmental New Employee Safety Orientation may be obtained from the Physics Departments home page, <http://www.phys.washington.edu> or from the Physics Department office.

2. **Emergency Evacuation and Operations Plan (EEOP):**

The Department has developed procedures for evacuation in an emergency and for response to fires, bomb threats, chemical spills, earthquakes, etc. The EEOP may be obtained from the Physics Departments home page, <http://www.phys.washington.edu> or from the Physics Department office. All employees must be trained in the EEOP. If an employee moves to a new location, it is the responsibility of the employee's supervisor to ensure that the EEOP be reviewed for the new work-site. The fundamentals of the EEOP are summarized below:

a. Building floor plans showing safety equipment and exit pathways; On all floors of the Physics building floor plans are mounted on the walls at the entrance to all elevators, and stairwells. Do not use elevators in an emergency evacuation situation. The floor plans show the location of fire extinguishers and fire alarm pulls.

b. Evacuation procedures:

- The alarm signal to evacuate the building is a slow "whooping" sound accompanied by flashing strobe lights.
- Instructors, laboratory and teaching assistants must be familiar with the detailed evacuation procedure for their classroom and feel comfortable directing the students under their control. Full details may be found in the EEOP.
- Exit the building via the emergency exit doors and stairwells. The last person leaving the office/work space should close the door.
- Follow the instructions of the floor wardens who can be identified by their red jackets.
- Proceed to the evacuation assembly points (see below)
- NOTE: in the special case of an **earthquake** the building emergency alarm is unlikely to function. Do not evacuate the building until the shaking has stopped. Seek cover under desks or tables if available. Instructors, laboratory and teaching assistants should reassure and advise their class on the correct response. If there are no tables (i.e. in a lecture theatre) students should be instructed to **drop** to the floor, **cover** their head, and **hold that position**. Once the shaking has stopped students should be instructed to evacuate the building according to the instructions above. Emergency Detailed procedures for Faculty, Lecturers, and Teaching Assistants may be found at:
www.ehs.washington.edu/SafPlan/Index.htm

- c. **Evacuation assembly points:** There are three evacuation assembly points. These are shown on the building floor plans. The plan at the exit point will indicate the appropriate assembly point.
- d. **Methods for accounting for staff, students, visitors:**
- Evacuation assembly points are controlled by the appropriate floor warden. Identify yourself to the floor warden (wearing red jacket) and follow their instructions.
 - If you have a visitor ensure that the visitor accompanies you during the evacuation procedure.
 - Instructors, laboratory and teaching assistants should ensure that their class remains together as a group and work with the students to ensure that all are accounted for.
 - Remain at the assembly area unless instructed by an official. Do not re-enter the building until the all-clear is given by the Floor Wardens as instructed by the Fire Department.
- e. **Mobility-impaired occupants:** Give all reasonable assistance to mobility-impaired occupants of the building. Inform the Fire Department of the persons needs and whereabouts.

3. Accidents:

a. **Medical Emergencies:**

All medical emergencies must be reported to the nearest Emergency Medical Services (EMS). To do this:

Dial 9-911 from Campus phones

Remain calm, state the nature of the emergency. Answer all questions asked by the emergency dispatcher.

b. **Reporting accidents:**

All accidents *and near misses* must be reported to the employee's supervisor as soon as possible. Near misses are valuable opportunities to correct unsafe situations. The form #UW 1428 "Incident / Accident / Quality Improvement Report" may be filled out by the employee, the supervisor, or both. How to get a blank form is explained on the EH&S website www.ehs.washington.edu (click on "Services" and then "Accident/Incident Reports"). Copies of completed forms should be presented to the Department Administrator listed on the "Useful Information" page at the back of this document.

c. **Investigation:**

All accidents and near accidents must be investigated by the supervisor who then summarizes the details and corrective measures in the above report. EH&S and the department's safety committee review the report. Assistance from EH&S is available by calling 206-543-7388.

4. First Aid and CPR Access:

First aid kits are located in the office of the floor wardens. The floor wardens are encouraged to receive training in first aid. The names of the floor wardens and the locations of their office are listed next to the building floor plans mounted on the walls at the entrance to all elevators, stairwells and on the “Useful Information” page at the back of this document.

5. Safety Problems: Reporting and Resolving:

Employees are encouraged to report safety concerns to their supervisor. If employees do not feel they can do this, or have done so and do not feel the problem has been resolved, they may discuss the situation directly with their safety coordinator or safety committee representative given below. Assistance from EH&S is available, if needed, to resolve a problem. Safety problems may be reported on the same form as accidents/incidents.

6. Safety Meetings:

The department Safety Committee meets during the last week of each quarter, Minutes of these meetings can be found at the Physics Departments home page <http://www.phys.washington.edu> . The names and phone numbers of current committee members may be found on the “Useful Information” page at the back of this document. The committee welcomes feed-back and suggestions from all members of the department.

7. Safety Bulletin Boards

The departmental safety bulletin boards are used for posting safety related information. The department safety bulletin board is located outside the student shop at the basement level of the Physics Building.

C. ACCIDENT PREVENTION:

The following table may be used to identify hazards and reduce accidents:

Check All That Apply	Typical Worksite Hazards or Preventive Measures	Offices	Class-rooms	Labs	Shops
	Applies: A=Almost Always, B=Commonly, C=May Apply, Blank=Rarely Applies				
	Emergency Procedures: Fire, Other (EEOP)	A	A	A	A
	Earthquake Preparedness	A	A	A	A
	Housekeeping Hazards	A	A	A	A
	Slip/Trip Hazards	A	A	A	A
	Electrical Equipment & Wiring	A	A	A	A
	Emergency Escapes (Egress) Maintained/Unlocked	A	A	A	A
	Obstruction-Free Aisles	A	A	A	A
	Stacks of Stored Materials (Stable/Secure)	A	A	A	A
	Temperature Extremes: Heat/Cold, cryogenics	A	A	A	A
	HazCom Right-To-Know (Written Program In Place)	A	A	A	A
	Air Contaminants, Dusts, "Inert" Gases, Vapors	A	A	A	A
	Workplace Violence	A	A	A	A
	Lifting >20 lbs.	A	A	A	A
	Repetitive Motion, Ergonomics	A	B	A	A
	Motor Vehicles	A	A	B	A
	Hand or Portable Power Tools	B	B	A	A
	Ladders	B	B	A	A
	Knives or Cutting Blades	B	C	A	A
	Compressed Gas or Equipment		A	A	A
	Hazardous Waste	C	A	A	A
	Haz-Mat Spills: Operations, Emergency Response		A	A	A
	Hazardous Materials Stored/Shipped/Transported	C	B	A	A
	Laboratory Chemicals		B	A	A
	Radioactive Materials Used or Stored		A	A	
	Personal Protective Equipment (PPE)	C	B	A	A
	Respirator Protection, Workplace Evaluations		B	A	A
	Bloodborne Pathogens/Biohazards/Infectious Waste		B	A	B
	Welding, Cutting, Brazing		B	A	A
	Machinery (Machine Guards)		B	A	A
	Lock-Out/Tag-Out		C	B	A
	Confined Work Spaces / Oxygen-Deficiency			C	C
	Lasers or UV Light		C	A	A
	Flammable Liquids (Handled or Stored)		C	A	A
	Carcinogens			A	A
	Lead or Benzene (Handled or Stored)			A	A
	Loud Noise			A	A
	Vibration From Tools/Machinery			A	A
	Heights > 4 Ft. (Possible Falls)	C	C	A	A
	Cranes, Hoists, Derricks, Rigging		C	A	A
	Powered Platforms (Personal Lifts)		C	C	A
	Forklifts			C	A
	Scaffolds		C	C	B
	Excavation, Trenching or Shoring Activities				

Employees should use the table to identify potential hazards in their work space and consult with their supervisors for appropriate action or training classes. Supervisors should ensure that their employees' training is current. Information on training classes available can be found at <http://www.ehs.washington.edu>

Chemical Inventory, Laboratory Safety System, Emergency Contacts:

It is the responsibility of all supervisors and P.I.'s to ensure a safe work place. This includes offices, classroom, laboratories and shops. Where appropriate Laboratory Safety Manuals should be maintained. Maintenance and inspection of equipment must be carried out according to schedule. Appropriate personal protective equipment must be provided. Where appropriate, "Standard Operating Procedures" (SOP's) should be applied. Copies of the SOP's should be maintained in the Laboratory Safety Manual.

Laboratories with supplies of chemicals must maintain a Laboratory Safety System (LSS) and a current Emergency Package listing all knowledgeable staff with emergency contact numbers on the door of their laboratory.

No employees or students may use shop equipment, chemical inventory, radioactive isotopes, or access cryogenic supplies unless they have received the appropriate training.

Safety Maintenance Work :

P.I.'s and laboratory supervisors should consult the Laboratory Safety Survey Checklist which may be obtained from the EH&S web site. The P.I. of each lab must certify annually that maintenance work has been done by completing the "Principal Investigator Certification of Laboratory Safety Maintenance" form and filing this with the main office. Department safety events and department-wide preventive maintenance are outlined on the department safety calendar which may be obtained from the Department Administrator identified on the "Useful Information" page at the back of this document.

D. DOCUMENTATION

Record-Keeping:

P.I.'s should keep a copy of all employee training, Standard Operating Procedures, Chemical Inventory, and other safety information relevant to their lab as a part of their laboratory safety manuals.

In compliance with State requirements, our department maintains records of safety activities. These records include:

- New Employee Safety Orientation records
- Incident/accident reports
- Safety Inspection records
- Training records
- P.I. Certification of Laboratory Safety Maintenance record.
- Equipment maintenance records (cranes etc.)
- Copies of department safety plans, forms, meeting minutes etc.
- Names of key safety personnel and other useful information.

These records are located in Physics Department main office and are updated annually. For more information please contact the front desk of the Physics Department main office.

Applicable policy and laws:

For further information on laws and university of Washington policies that apply to laboratory, shop and office safety, consult the following sources:

- Washington Administrative Code, Chapters 296-24, 296-62, 296-800
- Seattle Fire Code
- UW OPS Manual
- UW Environmental Health and Safety: www.ehs.washington.edu
- OSHA, WISHA
- EPA
- PSCAA (Puget Sound Clean Air Agency)
- Metro & King County
- Board of Health (Radiation Safety)
- Your safety committee chair

Principal Investigator Certification of Laboratory Safety Maintenance

I, _____ (Print PI Name) certify that the following safety maintenance tasks have been completed for laboratory _____ (Room Number) for the year _____. I recognize that I bear responsibility to ensure safe laboratory practice in this lab.

Initial each item certifying completion:

- Laboratory Safety System Chemical Data is current for my lab. Material Safety Data Sheets (MSDS's) are available for all chemical in my lab -- All lab employees are able to access to MSDS's at all times.
- All chemicals are clearly labeled and stored appropriately.
- Spill cleanup and first aid kits are available and restocked. Appropriate personal protective equipment is easily accessible to all employees.
- Gas cylinders are secured and are being used in a safe manner.
- Laboratory procedures are documented and have been reviewed for safe practice.
- Employee safety training has been reviewed and training is appropriate for their current job duties.
- All chemical and radiation safety practices have been reviewed and updated where appropriate.
- I recognize that this list is not comprehensive and a full review of all safety practices is my responsibility alone.

I recognize that safety consultations and questions can be addressed through EH&S at (206) 543-7262. The Department encourages the P.I. to conduct periodic reviews of lab safety using EH&S's Laboratory Safety Survey Checklist available at: <http://www.ehs.washington.edu/Forms/Index.htm>

By signing below, I certify that my laboratory is in compliance with University of Washington mandated safety procedures.

Signed: _____ (Principal Investigator)

Print: _____

Date: _____

Return completed form to Physics Department Office.

Useful Information

1. Department: Physics
Main Office:
Room C-121 Physics Astronomy Tower
(206) 543-2770, FAX (206) 685-0635
<http://www.phys.washington.edu>
2. Department Administrator: Linda Nelson
Room C-121J, Physics Astronomy Tower
(206) 616-9652
lrn@phys.washington.edu
3. Last Updated (date/person): August 2004 / Linda Nelson & Peter Doe
4. Safety and Health Coordinator: Peter Doe
Room B-458, Physics Astronomy Building
(206) 543-8862
pdoe@phys.washington.edu
5. Departmental Safety & Health Committee Members:
Jason Alferness (Building Manager) (206) 221-2974
Peter Doe (Committee Chair) (206) 543-8862
Stan Vlcek (Astronomy) (206) 221-7295
Marjorie Olmstead (206) 685-3031
Derek Storm (CENPA) (206) 543-4085
Mike Vinton (Shops) (206) 685-4266
6. Floor Wardens: for a complete list, see the Emergency Evacuation & Operation Plan (EEOP) at www.phys.washington.edu/safety.htm

FLOOR	NAME	OFFICE #	PHONE #
Basement	Mike Vinton	Shop B-076	(206) 685-4266
1 st	Michael Andersson	B-140	(206) 543-7094
2 nd	David Pengra	B-256A	(206) 543-4783
3 rd	Jeffrey Wilkes	B-303	(206) 543-4232
4 th	Justin Galloway	B-402	(206) 543-2400
5 th	Blayne Heckel	C-515	(206) 685-2401
6 th	Pamela Yorks	Library Office	(260) 543-2988

7. EH&S Phone Numbers: www.whs.washington.edu , click on "Phones"