

# The Waste-Paper

“Waste is a terrible thing to mind”

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## Training Policy at Princeton

All faculty, staff, students, and visiting researchers performing research in laboratories must attend the University’s Laboratory Safety training, regardless of previous training and experience elsewhere. In addition, any individual working with hazardous chemicals in workplaces other than laboratories must attend Hazard Communication Training. If you conduct research with recombinant/synthetic nucleic acid molecules that are not exempt from the [NIH Guidelines](#) and/or biosafety level 2 materials you must attend *Intro to Biosafety* training. EHS offers many training programs to meet the needs of the university community, including radiation safety, laser safety, and respiratory protection to name a few.

The University’s training management site is available at [www.princeton.edu/training](http://www.princeton.edu/training). Despite the name, the *Employee Learning Center* is intended for students, faculty and staff and provides the campus community with a single location for all training needs. Individuals may review their own training history (record) as well as view upcoming training sessions offered by several University offices, including Human Resources, OIT, General Council, and EHS. Individuals may enroll in training sessions as they wish, right from the Employee Learning Center.

The screenshot shows the Princeton University EHS Training Calendar. At the top, there are navigation tabs for various departments: Environmental Health & Safety, Finance & Treasury, Human Resources, Office of Information Technology, and ORPA / Coeus. Below these are links for All Safety Training, Biological Safety, Multi-Discipline, Workplace Safety, Laboratory Safety, Radiation Safety, Emergency Preparedness, Fire Safety, eLearning, and Department Highlights. The main content area is titled 'Enrollments' and shows a table with 3 enrollments available. The table has columns for Enrollment Name, Enrollment Description, Event Start Date/Time, Event End Date/Time, Seats Available, and Event Location. Two training sessions are listed: 'Laboratory Safety Training - 10/9/2015' and 'Laboratory Safety Training - 11/13/2015', both with 55 seats available and held at Frick Chemistry Lab, A57.

Example – EHS Training Calendar

To register for an EHS training session, click the graphic above or follow the link in the preceding paragraph. On the main navigation bar, directly under the Princeton University shield, position your mouse over “Training by Department and select “Environmental Health & Safety”. The EHS training calendar is posted on the site and new sessions are added regularly. Simply ‘click’ on the training title to enroll in the training session of your choice.

If you do not see a training session that you require, please contact EHS at 8-5294 to inquire as to the next session date, or to schedule a special session for your lab or group.

## Laboratory Access and Training

Because Princeton faculty, staff, students, and visiting researchers must take Laboratory Safety Training prior to working in laboratories, EHS routinely receives questions regarding lab access prior to the next available training date. In order to easily answer these questions, EHS has designed a quick reference chart.

	Laboratory Safety Training Requirements	EHS Recommended Key Access	Supervision
Undergraduate Students	before working in a lab	case-by-case for third and fourth year	always for hazardous ops.
Graduate Student	first available after arrival	after training	before training
Staff	first available after arrival	after training	before training
Faculty and Lab Supervisors	2 part training, first available after arrival	upon arrival	n/a
Visiting Researchers	first available after arrival	after training	before training
Short-term Visitors	leaflet only	never	Always
High School Interns	before working in a lab	never	always

For more information, see [Access Recommendations](#). Please contact [Kyle Angjelo](#) via email or phone at 8-2711 with any questions or concerns.

## This Month’s Waste Disposal Drop Off: Wednesday, September 23, 2015

### Lewis Thomas loading dock

- Collection room open from 2:45 - 4:00 PM
- Coordinators: [Michael Fredericks](#) (8-1351) for Molecular Biology and [Bob Koenigsmark](#) (8-4123) for Geosciences

### Jadwin Loading Dock Building

- Coordinators: [Philip Fairall](#) (8-3913) for Chemistry and [Jim Kukon](#) (8-4364) for Physics

### E-Quad Room 7 (E-Quad and Bowen)

- Collection room open from 2:00 - 3:00 PM
- Coordinators: [Joe Laskow](#) (8-4739), [Phil Curry](#) (8-4563) or [Anthony Schulz](#) (8-4563)

### Hoyt Laboratory, 185 Nassau

- Waste collection conducted as-needed. Please coordinate with [Kyle Angjelo](#) (8-2711)

## Hazardous Waste Management and Disposal Program

Chemical waste management and disposal is highly regulated under federal and state laws. Improper container management and disposal may subject the University to serious financial and criminal penalties. The following summary provides guidance on how to manage waste in your lab properly:

### What is Hazardous Waste?

Unwanted chemical stock or used chemicals are considered hazardous waste if they are:

- **Ignitable** (flammable liquid or solid, oxidizer, etc.)
- **Reactive** (unstable under normal conditions)
- **Corrosive** ( $\text{pH} \leq 2$  or  $\geq 12.5$ )
- **Contain certain metals or organics** toxic to humans or that adversely impact the environment (see [web page for more information and chemical lists](#))

### Packaging Chemical Wastes

Place chemical waste in sealable containers that are compatible with the chemical being stored. Fill containers completely, but always leave 5-10% volume of headspace to allow for expansion.

Containers must be closed except when actively filling. Do not leave open funnels in hazardous waste accumulation containers. This not only constitutes a violation of NJ and Federal laws, but also affects air quality of the lab.

Similar wastes may be combined into containers so long as they are chemically compatible (e.g. acetone and methanol). If you routinely generate significant quantities of compatible chemicals, EHS provides complimentary 5-gallon carboys for this purpose through E-Quad, Frick and LTL stockrooms.

### Labeling of Chemical Waste Containers

Hazardous waste containers must be labeled with:

- The words "HAZARDOUS WASTE"
- Names and approximate percentages of the principal chemical constituents

The most convenient way to capture this information is by using hazardous waste labels available through EHS. See *label shown below*.

**HAZARDOUS WASTE**  
Federal & New Jersey Laws Prohibit Improper Disposal

Lab Group \_\_\_\_\_ Phone \_\_\_\_\_  
Responsible Individual \_\_\_\_\_

Contents \_\_\_\_\_ Approximate % \_\_\_\_\_

*Use Only Proper Chemical Names* \_\_\_\_\_  
No Abbreviations \_\_\_\_\_  
No Formulas \_\_\_\_\_  
No Structures \_\_\_\_\_

*All Hazardous Waste containers must be labeled and closed after adding waste!*  
Hazard Class (if known) \_\_\_\_\_  
Poison Flammable Reactive (air/water) Oxidizer Corrosive

Use full chemical names in English. Do not label waste with symbols, structural diagrams or product trade names (e.g., water not  $\text{H}_2\text{O}$ , phenol not Trizol).

Labeling should be accurate and legible and must include contact information for the person knowledgeable about that specific waste.

### Unidentified Chemicals

Unidentified chemical wastes cannot be legally transported or disposed. The responsibility for correctly identifying waste rests with the person generating the waste. Do not bring unidentified wastes to the pickup site. Contact EHS for guidance. The department or laboratory may be charged for any testing/analysis related to unknown chemicals.

### Storing Chemical Wastes

Store appropriately labeled and sealed containers of waste in your laboratory until the scheduled waste pickup. By law, you must keep the waste containers "at or near" the area where the waste is generated. You may not store wastes in a room different than the area of generation.

Separate incompatible wastes by storing those materials in separate areas or by using secondary containment to isolate containers. Secondary containment is required for chemicals and wastes stored near sinks or drains (including cup sinks). Secondary containment bins are available free from EHS.

### Disposal Procedure

Waste removal is performed on the last Thursday of each month (the November/December pickup is combined to accommodate the holidays). Bring your waste to your designated collection area the day before that month's scheduled pick-up. *Drop-off locations, times, and contacts are indicated above.*

### Waste Disposal Costs

Environmental Health and Safety (EHS) coordinates and pays for routine chemical waste disposal. Departments or laboratories assume the labor costs for specialized services, such as remediation of contaminated equipment and labs, large-scale chemical cleanouts, or field characterization of unknown or mismanaged chemicals.

### For More Information

Contact [Kyle Angjelo](#) at 609-258-2711 for more information on specific wastes and additional questions.

<b><i>EHS HAZARDOUS WASTE CONTACTS</i></b>	
Main Office	8-5294
Kyle Angjelo (Chemical Waste)	8-2711
Sue Dupre (Radioactive Waste)	8-6271
Jacqueline Wagner (Biohazardous Waste)	8-1427
Tom Drexel (Waste Paper)	8-6255
EHS Web Page <a href="http://ehs.princeton.edu">http://ehs.princeton.edu</a>	