Nuclear Engineering Safety

Welcome to Fall 2020

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Welcome to the n^{th} Annual Safety Talk by Dr. Bean

Safety is A Value

- Safety is a value
  - It is how we get things done
  - We work safely

- How do we work safely?
  - Learn what to do
  - Learn where to find information
  - Safe practices

Safety is A Value

- Safety is a value
  - I say this every year, yet just last week I had to point this out to an internet commando
- How do we work safely?
  - Your company (Purdue and NE) and you have to develop a safety culture

New This Year – COVID-19

- Protect Purdue Pledge Requires
  - Take responsibility for your health
    - *Wash/sanitize hands*
    - *Disinfect surfaces*
    - *Wear masks*
    - *Get tested as needed*
    - *Quarantine/Isolate as necessary*

Safety – In Case of Tornado

In case of Tornado, report to the lowest level of the building you are in.

Shelter away from windows.

Avoid areas where items may fall on you.

Safety – In Case of Fire

In case of Fire, pull the fire alarm and evacuate building and report to assembly area

For **WANG** Hall, this location is:

The parking lot behind the building, where Northwestern Ave is the front.

Find out where it is for each building in which you spend time.

Shelter In Place Procedure

If you are directed to shelter in place, but you are unaware of the specific reason, proceed to the lowest level of the building but continue to seek additional information by all possible means to determine the type of incident. Once you have determined the type of emergency, follow the below chart:

EMERGENCY	EMERGENCY ASSEMBLY AREA (EAA)—SHELTER IN PLACE
Weather-Related—Tornado Warning	Basement corridors, basement offices, basement restrooms Or the lowest level of the building (stay away from windows and doors)
Hazardous Materials (HAZMAT) Release	Remain in or find an unaffected office or work area and close windows and doors.
Civil Disturbance – riot, active shooter, etc.	Seek a safe location, preferably a room without windows that can be locked or secured by barriers.

Other Buildings?

- Every building on campus has a Building Emergency Plan (BEP)
- They can be found at https://www.purdue.edu/ehps/emergency_preparedness/emergency/building-plan.html
- Faculty member's job is to make sure you have access
- **Your job is to read it.**

Why is Laboratory Safety Important?

Prevention of

- Injury
- Loss
- Lost time
- Lawsuits

- PIs and Lab Supervisors are responsible for safety and lab training.
- But, in the end, **YOU** are really responsible for your own safety.

Purdue Safety Requirements

- Executive Memorandum C-36, the Revised Environmental Health and Safety Compliance Policy, appoints the Vice President for Physical Facilities as the Environmental Health and Safety Compliance Officer (OSHA Officer) for Purdue University.

- C-36 requires Purdue staff to comply with all applicable environmental health and safety (EHS) laws, policies, procedures, and instructions.

- The OSHA Compliance Officer is responsible for and authorized to develop and implement EHS programs and coordinate and monitor compliance.

Radiological and Environmental Management-REM

- REM serves as a consultant to the University Community in all safety related areas.
- Assists in monitoring regulatory compliance with various federal, state, and university regulations involving environmental, health and safety issues.
- Services include training, consultation, emergency response, and waste removal.
- https://www.purdue.edu/ehps/rem

HazCom/Chemical Hygiene Plan

- The Hazard Communication Standard (HCS) is an Occupational Safety and Health Administration (OSHA) regulation.
- HCS may also be referred to as the Right-to-Know Law.
- HazCom, as it may also be called, is a standard intended to protect employees from physical and health hazards that they work with or be exposed to.
- Spells out laboratory plan to be in compliance with University and Regulatory requirements and expectations relating laboratory use of hazardous chemicals.

Important: Do not Pour chemicals down the drain!

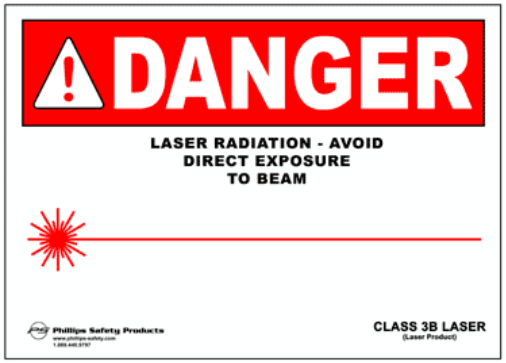
Safety Categories

- Hazards
- Chemical
- Radiation
- Laser
- Biological
- Other

Radiation Safety

- The Radiation Safety Section is responsible for complying with regulations set forth by the Nuclear Regulatory Commission as well as the Indiana State Department of Health for the safe use of radioactive materials on campus.
- REM accomplishes this by providing several types of training, radioactive waste pickups, calibration services, personnel dosimetry to monitor radiation exposure, as well as consulting support for all of your safety concerns.
- RSO: Dr. Jim Schweitzer, 49-42350, jfschwei@purdue.edu
- Radiation Safety Manual https://www.purdue.edu/ehps/rem/home/booklets/radman.pdf

Laser Safety



- Based on the President's Executive Memorandum No. D-2 and the Purdue University Laser Safety Guidelines, individuals are officially authorized to use Class 3B and Class 4 lasers on their respective projects upon receiving appropriate laser safety training, demonstrating competency, and submitting complete application forms bearing the authorization name and signature of the Laser Principal Investigator (LPI).
- Laser Safety Officer: Matthew Tang, mmtang@purdue.edu 49-42721
- https://www.purdue.edu/ehps/rem/home/booklets/laserguide.pdf

Biological Safety

- It is the policy of Purdue University to take every reasonable precaution to provide a work environment that is free from recognized hazards for its employees in accordance with the General Duty Clause of the Indiana Occupational Safety and Health Law (IC 22-8-1.1 Section 2).
- Laboratory supervisors and principal investigators are responsible for biological safety in the laboratory.
- BioSafety Officer: Bob Golden, 49-41496, rgolden@purdue.edu
- https://www.purdue.edu/ehps/rem/home/booklets/bioman.pdf

Other Hazards

- Use appropriate Personal Protective Equipment (PPEs)
- Use Lockout/Tagout Procedures when entering a dangerous area

Proper Storage of Hazardous Materials

- Make sure all materials are stored properly.
- Make sure all containers are properly sealed and labeled.
- Make sure all waste containers are properly sealed and labeled.

Hazardous Materials Management

- Purdue manages hazardous waste under a permit granted to Purdue by the Indiana Department of Environmental Management and the United States Environmental Protection Agency. It is the responsibility of each hazardous waste generator to manage their waste according to Executive Memorandum No. C-36 and Guidelines: Handling and Disposal of Chemicals. To have waste removed from individual campus locations; a Hazardous Materials Pickup Request Form must first be submitted.
- https://www.purdue.edu/ehps/rem/home/booklets/hwdg.pdf
- Contact: Eric Johnson, 49-69359; johns371@.purdue.edu
- **ALL CONTAINERS MUST BE KEPT CLOSED AND CLEARLY LABELED.**

Workplace Injuries

- All injuries must be reported, no matter how minor.
- Supervisor must complete the *First report of injury form* and submit to REM within 48 hours:

https://www.purdue.edu/ehps/rem/froi/ai.html

Cell Phones

- **I**n **C**ase of an **E**mergency
  - Add I.C.E. to the phone book contact you would want called in case of emergency
  - Put it on the lock screen of your phone
- 911 from a cell phone may connect to the county system and they will immediately forward you to the Purdue dispatch.
- Add **765-494-8221** as a Purdue police non-emergency contact number