



EMERGENCY PREPAREDNESS DRILL



Pittsburgh Bureau of Fire HAZMAT Drill de-contamination area



Members of the Emergency Preparedness and Response Team watch as HAZMAT Team arrives on the scene at Scott Hall during the drill



Members of EHS and HAZMAT containing the release of gases during the drill

Members of the university's emergency preparedness and response team conducted its second annual emergency response drill on November 5, 2019. The purpose of the drill was to exercise the university's emergency response protocols, including coordination with external agencies. The drill simulated a hazardous materials release at the LL212 Nanofabrication Laboratory - Process Equipment Room at Scott Hall.

The drill covered an end to end response including the initial response, rescue and containment, and activation of the EOC, Media Center and selected College of Engineering Business Continuity Plans.

It was a complex, multi-faceted drill with many internal areas and external agencies involved including the Emergency Preparedness and Response Team, Executive Management Team, Environmental Health and Safety (EHS), Marketing and Communications, the College of Engineering, the CMU EMS student group, City of Pittsburgh HazMat and City of Pittsburgh Emergency Services.

The exercise was a huge success. The entire Enterprise Risk Management and Division of Operations leadership team are grateful to all involved in the drill, which helps to ensure the preparedness of our campus. ♦

CORONAVIRUS UPDATE

As the coronavirus continues to make world news, Carnegie Mellon is taking preventative measures to protect the well-being of its university community.

Effective immediately, all CMU students, faculty and staff are restricted from traveling to China. This restriction applies only to those traveling to China for official university business. However, it is strongly recommended that those who are planning travel to China for personal reasons reconsider such plans. If you are planning to host visitors from impacted regions in the coming weeks and months, it is strongly suggested to consider rescheduling to a later date. If you have questions or need advice about how to proceed, please contact CMU's Enterprise Risk Management team at drbc@andrew.cmu.edu.

The university will continue to actively monitor guidance from the State Department and the Centers for Disease Control and Prevention (CDC) with the intention of removing restrictions as soon as it is deemed safe to do so. For travel advisory updates, we encourage you to visit [CMU's Travel Risk Information Program](#) website. Additionally, updates about the coronavirus are available on the [CDC website](#).

Fortunately, there are no confirmed cases of coronavirus at Carnegie Mellon, in the Pittsburgh area or in Pennsylvania at this time. However, the health and wellness of our community remain a top priority. As a reminder, symptoms for coronavirus may include:

- runny nose;
- headache;
- cough;
- sore throat;
- fever; and
- a general feeling of being ill.

The seasonal flu is also a concern on campus during this time of year, so please take the following precautions:

- Wash your hands often with soap and water for at least 20 seconds. This is the best defense against the spread of all viruses.
- Cover your cough/sneeze with a tissue or the bend of your arm, and then promptly wash your hands or use hand sanitizer if soap and water is not available.
- Stay home when you are ill and get plenty of rest/sleep.
- Get the seasonal flu vaccine. Though not protective against coronavirus, the seasonal vaccine may prevent against flu, which is circulating on campus and is known to cause possible severe respiratory illness.

If you are a faculty or staff member who has been to China within the last 14 days and are experiencing symptoms, you should contact your primary care provider immediately for guidance; you should also self-isolate.

Any student with fever and cough who has been to China within the last 14 days should immediately report to, or call University Health Services at 412-268-2157 for a consultation and self-isolate.

For continued updates, visit the [CMU-Alert Emergency Notification System](#) website. Please help our efforts by being vigilant about your health and doing your part to support a healthy campus community. ◆

RECENT CHEMICAL INCIDENT



An incident involving Piranha solution occurred in a Carnegie Mellon University laboratory whereby a waste collection bottle exploded causing injury to the lab worker. In addition, a significant spill cleanup was necessary before the lab could be reopened. EHS and the lab worked together to correct issues identified from the incident. This communication is being shared to highlight the importance of safety when working with Piranha solution.

Piranha solution is an etchant; it is a mixture of concentrated sulfuric acid and hydrogen peroxide. The maximum recommended solution is 3:1 to 7:1 sulfuric acid to hydrogen peroxide. One major finding from the incident was that the Piranha solution being used was a 1:1 mixture. Additional findings were that the solution was not left to cool and fully react out before neutralizing with sodium bicarbonate; and the waste solution was put in a bottle with the cap loosely placed on top, whereby the evolution of heat and expansion of gases exceeded the bottle's capacity.

The incident has provided a number of lessons learned, and EHS is using it as a learning tool to make others aware of lab safety in general and the dangers of Piranha solution and waste collection. EHS is also developing a guideline specifically for Piranha solution users, which highlights the important best practices:

- Always use glass (preferably Pyrex) containers. Piranha solution will melt plastics.
- Proper PPE should include thick acid-resistant gloves, goggles, face shield or blast shield and a lab coat, at a minimum. An acid-resistant apron is recommended. Ensure there is no exposed skin.
- Mix the solution in a fume hood with the sash between you and the solution. Slowly add the peroxide to the acid, watching closely the evolution of heat. Mix the smallest volume necessary for your sample etching, 100 ml is recommended (75 ml of H_2SO_4 to 25 ml of H_2O_2). Never exceed 30% concentration of H_2O_2 .
- Solutions are for one-time use. Never store Piranha solution.
- When collecting waste Piranha solution, always cool overnight in the open beaker and label the fume hood "Danger - Piranha Solution". After cool, neutralize the solution with sodium bicarbonate to a pH of 7. If the waste contains toxic metals, it should be collected in a waste bottle with a self-venting cap (EHS will provide these caps). If the waste does not contain toxic metals it should be poured into the sink with copious amounts of water. If unsure whether waste collection is required, check with EHS by email at safety@andrew.cmu.edu.
- Use Piranha solution during daylight hours, utilize the buddy system and inform lab mates when Piranha solution is in use.

If you work with Piranha solutions and have any questions, contact EHS at safety@andrew.cmu.edu. ♦

MELLON INSTITUTE SAFETY WEEK

Environmental Health and Safety is organizing a Safety Week at Mellon Institute during the week of February 10, 2020. The events during Safety Week are open to all faculty, staff and students.

The purpose of Safety Week is to raise safety awareness, provide support for EHS related matters, increase training compliance and answer any questions regarding safety in your work area. The EHS team is dedicated to improving workplace safety and employee health and continues our mission by kicking off the new year with Mellon Institute Safety Week.

Any student or staff member who attends a minimum of four trainings during Safety Week will be issued a safety certificate presented by Environmental Health and Safety. However, everyone can learn something new, whether it's how to safely use chemicals, biological materials, compressed gases, hazardous waste or what to do in case of a lab emergency.

The events of Safety Week will take place Monday through Friday, February 10-14 in the Mellon Institute Social Room (Room 328) and will include various safety trainings and an open Q & A Session for safety support. The safety training sessions will be held from 10 to 11:00 a.m. and the open Q & A session will be held from 11:00 a.m. to noon. The events are open to everyone and light refreshments will be served.

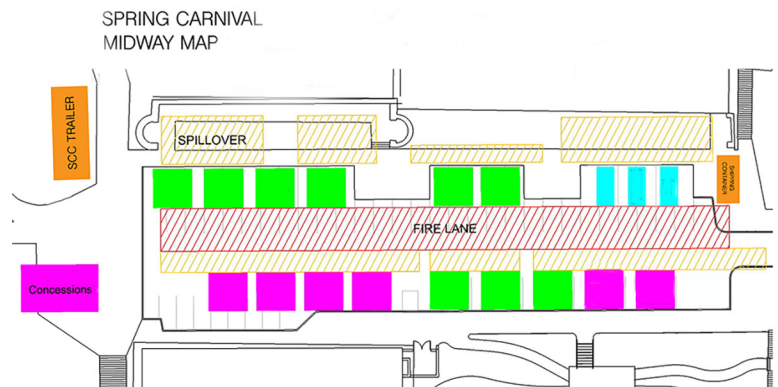
Below is the training schedule for Safety Week.

- Monday, February 10 @10:00 a.m. Laboratory Safety and Hazardous Waste Management
- Tuesday, February 11 @10:00 a.m. Bloodborne Pathogens
- Wednesday, February 12 @10:00 a.m. Compressed Gas Safety
- Thursday, February 13 @10:00 a.m. Fire Extinguisher Use
- Friday, February 14 @10:00 a.m. Common Laboratory Emergencies

Contact EHS at safety@andrew.cmu.edu with any questions. ♦



SPRING CARNIVAL SAFETY



Every April, the campus is filled with excitement as the annual Spring Carnival approaches. Spring Carnival is scheduled for April 16-18, 2020. However, it is defined as the 10 days from the Friday of Booth Move-on when construction begins, through Build Week, until the Sunday of Teardown when the demolition and clearing of all carnival related activities occur.

Move on this year is scheduled for April 10 and then booth building will continue into the week of April 13. Spring Carnival will begin on the 16th run through to the 18th and the students will tear down their booths on the 19th.

Midway, which is the area where booths are built and staged during Carnival, is closed during build week for the community's safety due to the hazards that may be present, such as tripping hazards, nails and moving scissor lifts.

In addition to the changes occurring in Midway during build week, parts of campus will undergo significant changes in the days leading up to Carnival due to the set-up of rides, games and concession stands. During this time and the weekend of Carnival, the most important thing you can do is to be aware of your surroundings. If you don't pay attention to where you are walking, you might miss an important warning sign or walkway detour. Plan your walking routes accordingly so that you know how to navigate around the construction fencing, closed stairs and limited sidewalks. Be cautious when bringing visitors to campus for meetings during construction. Be mindful that typical directions used to reach your meeting location or travel across campus will change, so your directions will need to change.

Carnival will bring more people onto campus and a greater chance for you to let your guard down. In the spirit of the CMUSafe Initiative, "See Something Say Something".

In the case of an emergency, Event Organizers, Leads and Officers will use an established emergency action plan and have access to bull-horns. These devices, in addition to Social Media, the university website and the Campus Police, will be used to relay emergency notifications.

Though Carnival is a thrilling and exciting time for students, faculty, staff, alumni, as well as many others in the Pittsburgh community, your health and safety is the top priority. ♦

LABORATORY CLOSE OUT

EHS recently developed a Laboratory Closeout guideline to be a guide for decommissioning and closeout of research materials and laboratory equipment. Notify EHS at least 30-days in advance of a pending closure.

Vacated laboratories operating within the University must be left in a state suitable for new occupancy or renovation activities. The outgoing personnel and department are responsible for:

- Ensuring the equipment and benches in the laboratory are left in a clean and safe condition,
- Movement of equipment from the laboratory space for relocation, repair and/or surplus,
- Proper disposal of chemical, biological and waste materials and equipment, and
- Completion of the Laboratory Closeout checklist and returning it to EHS.

The guideline does not apply to radioactive materials use laboratories. Contact the Radiation Safety Officer (RSO) to initiate the proper closeout procedure.

Visit the EHS website at <https://www.cmu.edu/ehs/Guidelines/ehs-guideline---laboratory-closeout.pdf> to view the guideline and checklist. For any questions, contact EHS at safety@andrew.cmu.edu. ♦

SMOKE-LESS POLICY

EHS has received several concerns regarding smoking in non-designated areas. Carnegie Mellon's Smoke-Less Campus Policy, which was approved in August 2017, prohibits smoking in all university buildings and facilities, and limits smoking to designated outdoor areas on the Pittsburgh campus. Smoking of tobacco products is prohibited in all university buildings and facilities owned, leased, or operated by Carnegie Mellon University, including campus vehicles. Smoking of tobacco products is also prohibited on all grounds and outside areas except for limited designated outdoor areas where the negative effects of second-hand exposure is deemed sufficiently low. As such, major campus thoroughfares, gathering spaces and entrances to buildings will be free from any designated areas. Use of e-cigarettes and vaporizers is prohibited inside all university buildings and inside all property owned, leased or operated by Carnegie Mellon University, but is not prohibited outside on campus grounds as of the adoption of this Policy. Signs have been posted in both no smoking and designated smoking areas.

The "smoke-less" approach honors our campus geography and is grounded in sustained and visible efforts to reduce smoking and promote cessation. This approach also demonstrates the University's commitment to encourage and support the reduction of significant health risks to members of the community. Policies that strictly regulate smoking have been demonstrated to reduce exposure to second-hand smoke, tobacco-related death and disease, and attendant healthcare costs.

A map highlighting the smoking areas on the Pittsburgh campus is available on the EHS [website https://www.cmu.edu/ehs/Workplace-Construction/smoking-on-campus.html](https://www.cmu.edu/ehs/Workplace-Construction/smoking-on-campus.html). Please adhere to the smoke-less policy and smoke only in designated locations for the health and safety of our campus. ♦

DRESSING FOR WINTER WEATHER



We've been lucky lately, with some unseasonably mild winter weather, and despite what Punxsutawney Phil predicted, we still have plenty of winter left in the coming months. Even when the temperatures hit close to 50 degrees in the afternoons, many of us are leaving for work or class early in the mornings while it's at or below freezing outside.

Dressing in layers is extremely important during winter months, especially when temperatures fluctuate throughout the day. Layering allows you to remove or add clothing so that you never get too cold or too hot.

The key to proper layering is using the right materials. For instance, wool, wool blends or polyester/fleece blends will be warmer for the frigid mornings but won't overheat you later in the day. The main layers to consider are:

- **Base layer** – Your next-to-skin layer – such as long underwear. The best base layers are made of polyester, polypropylene, merino wool, silk or other materials that wick moisture and dry quickly. These fabrics also offer extra warmth and insulation with less bulk, so they're great under any type of clothing. And they help your temperature adjust so you don't sweat while you are sitting at your desk or in the classroom.
- **Insulating layer** – the layer you wear over your clothes. This layer will help you retain heat by trapping air close to your body. Natural fibers, like wool, goose down or a fleece work best. Choose clothing that you can remove easily when you get to your office or classroom and either put back on or fold up in your backpack when you return outside. If you are wearing the proper base layer, your regular clothing doesn't matter as much, whether it's jeans and a button-down shirt or dress pants and a sweater.
- **Outerwear** – This is a weatherproofing layer to protect you from wind, rain and snow. It should be tightly woven, and preferably water and wind resistant, to reduce loss of body heat. A waterproof, windproof parka with a hood is a good option.
- **Other accessories** – includes hats, gloves and scarves. Hats reduce the amount of body heat that escapes from your head and gloves protect your hands since heat leaves the extremities to keep your core warm. Scarves are great for warmth around the face and neck. In addition, disposable hand and toe warmers can be used when it's extremely cold, and traction aids like *Yaktrax*, can be worn in icy conditions.

When it comes to staying comfortable at the bus stop or walking between buildings, layering is easily one of the best methods for adapting quickly to changing weather conditions. ◆

WORD JUMBLE

Put your puzzle solving skills to the test with this safety word jumble. Read the clues and look carefully at the jumbled words. Unscramble as many as you can into real words related to safety.

Campus-wide health and safety management system that tracks training, equipment and laboratory inspection records:

RAOBFIT

What you wear in a laboratory to protect your eyes from chemicals:

OGEGSGL

Helps to assist with proper working posture:

ORGNEMCSIO

This keeps you from inhaling dust and other harmful particles in the air:

RRAPIRESTO

To avoid slipping on stairs, always hold onto:

AHNLIRAD

Able to catch on fire easily:

MFBLALMAE

Acronym for using a fire extinguisher:

PSAS

Who is responsible to ensure a safe workplace:

EYENEVRO

Hand protection needed when working with chemicals, bio-hazards, hand tools, etc.:

LOVSGE

When lifting always bend from the:

NEEKS

Follow these procedures if there is a fire or some other emergency:

EAVONACITU

Under no circumstances should these be blocked:

EMRECYEGN TIXES

Cross roads at these:

SSRSOWCLKA

See Something, Say Something:

MUC ESFA

STAFF SPOTLIGHT



John A. Guerra joined the Environmental Health and Safety team as the new Fire Safety Manager on October 28, 2019. He comes to Carnegie Mellon University with over 23 years of higher education and fire safety experience. John is a retired Fire Lieutenant with Purdue University Fire Department. John holds a Bachelor's degree in Fire Science, an Associate Safety Professional (ASP) certification and a national certification as a Fire Inspector. He recently moved to the Pittsburgh area, coming from the University of South Florida in Tampa, Florida as their Safety and Compliance Manager. Please join us in welcoming John to the Carnegie Mellon community. ♦

EHS WOULD LIKE TO HEAR FROM YOU!

We encourage all members of the Carnegie Mellon University community to submit safety improvement ideas that impact your personal safety on campus or the safety of the greater community. Your participation will help raise safety awareness in our community! Please submit your safety concerns/ideas to: safety@andrew.cmu.edu.

In addition, if you have any suggestions for the next newsletter, please submit your ideas to Mary Sickles at: msickles@andrew.cmu.edu. ♦



SEE SOMETHING? SAY SOMETHING

Help ensure the safety and well-being of the CMU community by calling:
University Police: 412-268-2323
Ethics Hotline: 1-877-700-7050 ♦

