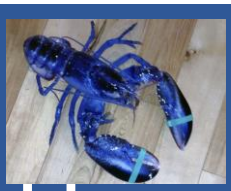
ENVIRONMENTAL HEALTH AND SAFETY



Lab Chatter

UNIVERSITY OF NEW ENGLAND
INNOVATION FOR A HEALTHIER PLANET

Volume 4, Issue 7, April-May 2018

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Safety Spotlight

Proper lab attire by Jessica Tyre

It's that time of year again. The temperatures are going to be warming up and building temperatures will be climbing. It is important that as the spring and summer weather approaches that we pay close attention to proper lab attire for faculty, staff, students and volunteers. The following are required to enter UNE laboratories:

- Long pants (no shorts, skirts, capris, etc.)
- Closed shoes (no sandals, ballet flats, flip flops, etc.)
- Covered midriff (no shirts that expose the midriff)
- Long sleeves, lab coat or gown
- Long hair tied back
- Safety glasses and goggles (as needed depending on hazards present)

The only exception is Marine Science Center field labs where there are no hazards present (including chemical, biological or environmental). These labs will be handled at the discretion of the instructor based on the risks analyzed.

Instructors may ask any individual in any UNE laboratory to leave if they are not dressed safely and appropriately for lab activities or hazards that are present.

Field work safety

By Peter Nagle

Laboratory work in the field can be an invaluable and positive experience for the students, but field work can also create its own challenges and hazards. Any outdoor activity whether it is in the tidal pools near UNE or in uncontrolled environments or remote areas can be considered field work. When planning for field work it is wise to prepare for any potential hazards that may be encountered in the outdoors. When the outdoor activity is well planned and organized, the possibility of accidents is greatly reduced.

With each field trip or outdoor lab, instructors and field work leaders are responsible for assessing any potential hazards they may encounter and for taking precautions against those hazards identified. They must then communicate all hazards identified and instruct all participants on how to manage and avoid them. The following is a list of outdoor hazards students and faculty could encounter outdoors.

Outdoor Hazards

- Dehydration
- Heat exhaustion/heat stroke
- Sunburn
- Fatigue
- Uneven terrain
- Rock falls
- Severe weather
- Wildlife
- Poisonous plants
- Water bodies (drowning)
- Hypothermia (winter hazard and cold water hazard)

Each field trip or outdoor activity creates its own unique hazards. For example being on a boat has hazards that would not apply to a lab collecting samples on shore. There are also seasonal hazards to consider. Both hot and cold weather present a different set of hazards. Below is a list of common PPE needed while working outdoors.

Personal Protection Equipment (PPE)

- Safety glasses if doing work that creates a hazard to the eyes
- Rain gear if inclement weather is expected
- Sunscreen (SPF 30 at a minimum)
- Long sleeved shirts recommended for protection against insects or plants
- Insect repellant
- Sturdy footwear with ankle support for walking on uneven or unstable surfaces
- Work gloves if performing labor intensive work
- Seasonal clothing and gear

outdoor safety continued…

Of course, even the best plans cannot always prevent emergencies. Because outdoor environments are uncontrollable, accidents are always a possibility. The key is to be prepared for emergencies that may occur. Always make sure first aid kits and emergency gear are well stocked before leaving. Below is a list of emergency items that are helpful in the outdoors.

Emergency Gear

- First Aid kit
- Marine gear such as life vests or signal flares
- Potable water to avoid dehydration
- Portable radio
- Flashlight
- Signal mirror

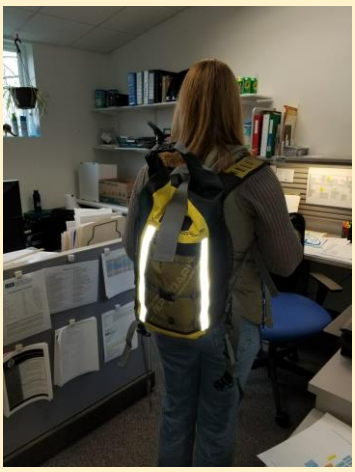
The main point is to first protect yourself and all participants from any known hazards in the field and secondly to be prepared for any accidents or emergencies that may occur in the outdoors. By keeping this in mind we can ensure safety for all participants in the field and keep accidents to a minimum.

Below are a few websites with additional and more in-depth information:

https://www.rei.com/learn/expert-advice/first-aid-checklist.html
http://www.sja.org.uk/sja/first-aid-advice/hot-and-cold-conditions.aspx
http://www.wildbackpacker.com/wilderness-survival/articles/surviving-a-lightning-storm/
http://www.boatus.com/pressroom/release.asp?id=676

MARINE SCIENCE CENTER FIELD PACKS

The Marine Science Center has a couple of field packs available for UNE field trips and outings if anyone needs to borrow one/sign one out for an outdoor field work lab. The contents of the kits are below.
Please contact Addie Waters of the MSC if you are interested.



Contents:

- 1 Signal Mirror Whistle Combo
- 2 Motorola Radios with Chargers – check that they are charged
- 1 Rescue Throw Bag with 50 feet of line
- 1 CINTAS First Aid Kit
- 2 Safety Vests
- Zip Ties
- Duct Tape
- 4 oz. Bottle of Wound Wash
- 1 Knife

In the case of an emergency, please contact 911 with a follow up call to the UNE security office:

Contact Info

1. Emergency Services: 911
2. Security UNE ext. 2298 (Office 207-602-2298)

Security will generate an accident report and ensure that the appropriate people are contacted.

Please let Addie Waters (acoyac@une.edu or ext. 2671) know if the First Aid Kit needs to be refilled upon return of the kit.

Lab training requirements for all lab staff and lab volunteers

By Ronnie Souza

There are two questions that Human Resources and the EHS Department address every semester and prior to the summer break in regards to lab safety training:

1. What are the training requirements for employees and volunteers working in UNE laboratories?

2. When is a laboratory worker an employee or a volunteer?

Answers:
Employees and volunteers working in the UNE labs are required by federal law to complete lab training modules on Blackboard in the same way you complete annual training. If you are a PI in charge of a lab or a lab manager, you need to report (to Human Resources) all new and returning students receiving compensation including federal work study, temporary and part-time employees, adjunct faculty and student and non-student volunteers working in your lab.

If you have laboratory employees and/or volunteers in the categories below you are required to register them for Blackboard Training:

- Full and half-time salaried
- Full and half-time hourly
- 9, 10, 11, or 12-month faculty
- Adjunct faculty
- Temp salaried
- Temp hourly
- Paid student
- Unpaid student (volunteer)
- Unpaid non-student (volunteer)
- Graduate assistant

Contact Tammy Louko in Human Resources at extension 4256 to request a training registration form or go to V:\UNEDocs\HUMAN RESOURCES\Training. Once you have populated the training registration form with all the information requested, forward the form to Tammy Louko in Human Resources and she will set up the individual to gain access to the training on Blackboard.

It is also very important that any training for specialized hazards specific to your lab are presented by the PI to any persons working in the lab. This may include (but is not limited to) dry ice, liquid nitrogen, BSL-2 biological agents, DEA regulated drugs, animal behavior, etc. This is in addition to the required Blackboard training modules that individuals are assigned through Human Resources.

Chemical company takes on lax university lab safety

BY REBECCA TRAGER | 4 APRIL 2017 *VIA CHEMISTRYWORLD.COM*

Dow Chemical says academia can learn important lab safety lessons from industry. University chemistry departments in the US urgently need help from the chemical industry to improve laboratory safety practices, Keith Watson, Dow Chemical's global R&D director for coatings and monomers, told a plenary session that kicked off the American Chemical Society's Spring 2017 meeting in San Francisco, California on 2 April.

Too often health and safety training for students and lab personnel is 'an afterthought' for research universities, Watson said, adding that at Dow Chemical, new hires are kept out of the lab for two or three weeks while they receive comprehensive lab safety training.

'There is a chasm that still exists today between the safety practices at the university setting and what is accepted in industry,' Watson warned. 'There is an awful lot of liability being absorbed by the major universities today – it is only a matter of time before that really comes back to bite them.'

Dow Chemical decided a few years ago, over the objections of its attorneys, to provide all of its safety best practices for free to universities through an initiative dubbed the Dow Safety Academy. The company has posted dozens of short videos that universities can use within lab settings, for safety meetings and as best practices. Since its launch, more than 25,000 people have signed up to watch these videos, and the website has received about 250,000 hits from government entities, companies and academics.

In addition, Dow has partnered with the University of Minnesota, Pennsylvania State University and the University of California, Santa Barbara on pilot programs to improve lab safety within their chemistry, chemical engineering and materials research labs.

'We have literally brought graduate students into Dow and taught them how to work safely in an industrial setting, worked with them on governance issues, delegation of authority,' Watson said.

Since 2010, the company has hired more than 600 postdoctoral researchers and newly-minted PhDs. 'We have had to focus our energy at these schools to get the desired effect, but for too many professors their primary concern is their academic lineage or the pedigree they leave behind, not the well-being of the students that they have in their labs,' said Watson.

He urged universities to consider graduates' employment opportunities, and argued that US business schools are really healthy because they focus on how well their students fare in the job market. He noted that business schools publish employment information about their former students, which creates a culture of eagerness to ensure that their students get great jobs.

'Imagine if the top 25 chemistry departments at universities had to publish the average starting salary of newly awarded PhD candidates,' Watson remarked, to laughter from the audience. 'We chuckle, but it's doable, and would make for a pretty interesting look at the ratings,' he said.

Watson said the current university system in the US is facing 'serious disruption,' and predicted 'major change' soon. 'A student-first mindset is urgently needed,' he stated. 'If you create value for your students, everything else good follows.'

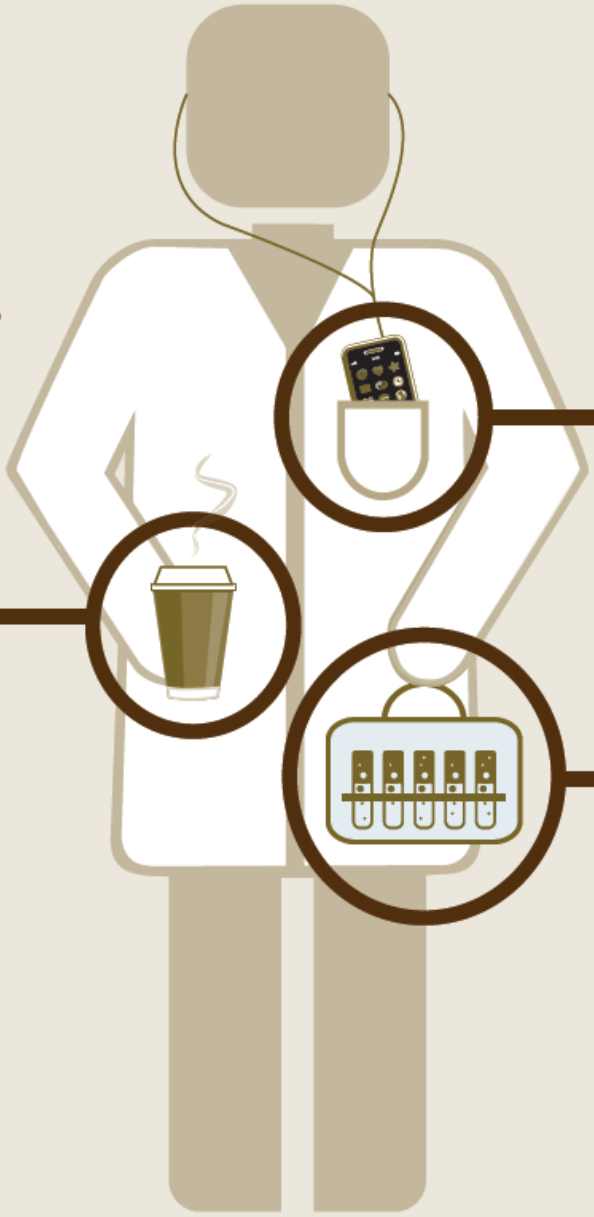
(https://www.chemistryworld.com/news/chemical-company-takes-on-lax-university-lab-safety/3007071.article)

What You Work With Can Make You Sick

Follow safe lab practices—and don't bring germs home with you.

Always wash your hands with soap and water...

- Right after working in the lab
- Just before you leave the lab



Don't carry dangerous germs from the laboratory home with you.

Leave personal items outside of the lab so you don't contaminate them: cell phone, car keys, tablet or laptop, MP3 player

Keep work items off of bench areas where you do experiments: backpacks, notebooks, pencils, pens

Avoid contamination while in the lab.

Don't eat, drink, or put things in your mouth (such as gum)

Don't touch your mouth or eyes

Don't put on cosmetics (like lip balm) or handle your contact lenses

Leave lab supplies inside the lab.

If you must take supplies out of the lab, keep them in a separate bag so you don't contaminate anything else

Leave your experiment inside the lab so you can stay healthy outside the lab.

Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Diseases

CS237165

UNE Chemical Sharing Program

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals that you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

Chemicals currently available:

Pyridine ≈ 80mL (opened 2013)
Pentane, Chromasolv ≈ 700mL (opened 2008)
Methanol ≈ 700mL (opened 2008)
Chlorform 25mL (not sure when opened) - about 1/2 the bottle left
2-Propanol ≈ 90mL (not sure when opened)
Acetic Acid ≈ 80mL (opened 2013)
Formic Acid ≈ 100mL (opened 2013)
Tris 1Kg (opened 2010)

If you are interested in any of the chemicals listed please email: **jtyre@une.edu** and the EHS department will transfer them safely to your lab's storage location.

Enjoy your summer!

See you in Fall 2018!

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