



CMU SAFE

Enterprise Risk Management launched the CMUSafe Initiative this spring. The purpose of CMUSafe is to empower the CMU community to say something if we see something through training, awareness and educational opportunities. Whether you are participating in an emergency evacuation drill, learning how to use a fire extinguisher or taking part in active shooter training, you are not only educating yourself on how to be better prepared for the uncertain, you are contributing to the preparedness and resiliency of our community.



See Something.
Say Something.

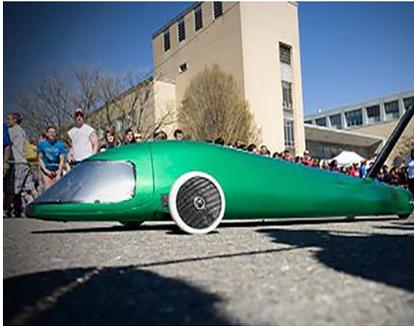
Please go to www.cmu.edu/safe to check out the resources that are available to you. A series of training videos are being released that focus on CMU-Alert and what it means to Shelter in Place:

- [CMUSafe - Welcome by Dr. Rodney McClendon, Vice President for Operations](#)
- [CMUSafe - What is CMU-Alert?](#)
- [CMUSafe - Shelter in Place](#)

CMUSafe will reinforce and demonstrate our resiliency as a community. Remember that if you see something, you should say something. ♦



CAMPUS ACTIVITIES



During April and May, campus is bustling with events, including Carnival, Sweepstakes (buggy races) and commencement. These events will bring more people onto campus and a greater chance for you to let your guard down. However, using basic common sense during such events will ensure that you do the most obvious things concerning your safety.

- Avoid being a victim. Stay alert and be aware of your surroundings. Use your eyes and ears to scout danger.
- Keep an eye on your belongings wherever you are.
- Don't let anyone into your residence hall that you don't know. Ask to see an ID first.
- Keep your car locked and check on it occasionally to make sure it is OK.
- Load emergency phone numbers into your phone, such as campus police (412-268-2323). Keep a charged cell phone within reach at all times.
- Use the buddy system when going out, especially at night. Use the [campus escort system](#) if you do find yourself alone at night. They're there to help you get home safe.
- Download the RideSystems App to keep track of the CMU Shuttle service.
- When organizing a ride through Lyft or Uber, never ride alone and make sure you enter the correct vehicle. Ask to see credentials and/or have the driver identify you as the passenger.
- Trust your instincts. If you think you are being followed, get to a safe environment quickly. This can be a well-lit place or where there is a group of people are hanging out. Make a scene if you think you are in danger. Scream, run, yell or honk your horn if you're in the car. If you are on campus use the Emergency Help Stations, identified by blue lights. Pressing the HELP button will alert Campus Police and provide instant two-way communication with first responders.

**Remember, keep you and CMU safe.
If you see something, say something! ♦**



See Something.
Say Something.

LASER CUTTER SAFETY PROGRAM

A laser cutter uses the intense energy of the laser beam to vaporize material placed on the laser cutter work surface. Materials can be engraved/etched, cut or scribed.

Engraving or etching is the technique where the laser beam transverses left and right, etching horizontal lines of material as it steps down the material vertically, similar to a laser or inkjet printer. The depth of material removed in etching is typically no more than 0.001" or 0.0254 mm, while engraving has a depth of 0.020" to 0.125" or 0.5 mm to 3.2 mm. Engraving is either done via vector engraving or raster engraving.

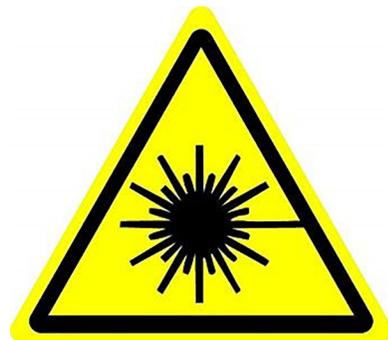
Cutting or scribing is the technique in which the laser beam follows a path to cut or mark a desired outline.

Due to the nature of laser cutter operations, laser cutters are potentially dangerous pieces of equipment and can cause fires if not used properly. Only those who receive training are permitted to use them.

The top things to remember when using a laser cutter are:

1. Complete safety training prior to the initial use.
2. Review the [Laser Cutter Safety Guideline](#) available on the EHS website.
3. Log in and conduct a pre-hot-work check prior to using the laser cutter.
4. Engage the emergency shutoff button when there is a fire or equipment malfunction.
5. Know what materials can be safely cut! Some materials such as PVC produce hydrogen chloride gas which is extremely dangerous. If you are unsure what material is safe to cut, contact EHS at safety@andrew.cmu.edu.
6. Never leave an operating laser cutter unattended.
7. Never defeat laser interlocks built into the cutter.

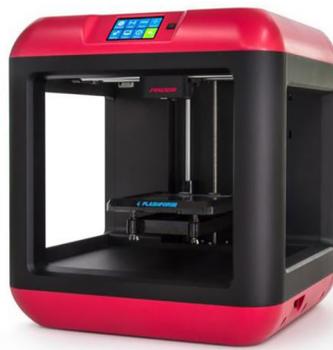
If you have any questions about laser cutter safety and/or to schedule training, please contact EHS at: safety@andrew.cmu.edu. ♦



3D Printer Safety

3D printers have made rapid prototyping and small-scale manufacturing easier and more accessible. However, 3D printers are not without their hazards. The fact that there are known hazards associated with the use of these types of printers has prompted EHS to take a closer look at the printers used on campus and evaluate them for their safety. The hazards include, but are not limited to:

- Exposures to-
 - o Nanoparticles
 - o Volatile Organic Compounds
 - o Hot Surfaces
 - o High Voltage
 - o UV Radiation
 - o Sharps
- Flammable and Reactive Dusts
- Other Chemical Hazards



There are a variety of printing materials available for use with 3D printers, each with its own inherent hazards. The two most commonly used materials are Polylactic Acid (PLA) and Acrylonitrile Butadiene Styrene (ABS). In general, PLA is much safer to use than ABS. Another printing material used is metallic powders which are generally used to fabricate tools and machinery parts.

Users must review product Safety Data Sheets (SDSs) for the material specific safety information before using a 3D printer. SDSs can be found through CMU's [MSDSonline](#) chemical inventory database and/or through the manufacturer's website.

Safety procedures to follow in order to prevent injuries and near-misses related to 3D printing processes include the following:

- Attending required training before using any 3D printer;
- Maintaining a safe distance from the printer to minimize the inhalation of particulates being created;
- Eating, drinking, applying cosmetics or handling contact lenses in rooms that contain 3D printing operations is not permitted. Users must wash their hands thoroughly after working with 3D printers;
- Following all PPE recommendations found in the SDS;
- Cleaning all work surfaces;
- Inspecting the 3D printer for any damaged wiring and safeguards before each use;
- Reporting all printer concerns, incidents and near-misses to the responsible person; and
- Turning off the printer if the printer nozzle jams, and allowing the printer to ventilate before removing the cover.

In addition to the above procedures, refer to the [3D Printer Guideline](#) posted on the EHS website. Contact EHS with any questions at safety@andrew.cmu.edu. ♦

DISTRACTED DRIVING



The National Safety Council has dedicated **April** as **Distracted Driving Awareness Month**.

Nearly everyone is guilty of some form of distracted driving. In fact, distracted drivers are almost everywhere you look. Unfortunately, drivers who are distracted and fail to focus their full attention on the road are the leading cause of most crashes, according to the National Highway Traffic Safety Administration. They injure themselves, their passengers and other drivers.

Driving requires your full attention. You can take charge of eliminating distractions to focus on the road ahead.

Here are some good ideas to help you drive more safely:

Use your cell phone for emergency situations only. Even then, it's best to pull over to make a call. Even hands-free devices can still cause you to miss important visual and audio cues needed to avoid a crash.

Avoid eating while driving. Eating on the way to work or school may seem like a time-saver, but it means you are less attentive to the drivers around you.

Do your multi-tasking outside the car. Avoid glancing at your calendar, searching for items and anything else that takes your attention away from the road. Get everything settled before you start driving.

Keep conversation light when talking to passengers. Save serious discussions or important news for another time.

If you are drowsy, pull off the road. Drowsiness increases the risk of a crash by nearly four times. A government study showed that 37 percent of U.S. drivers have nodded off or actually fallen asleep at least once during their driving careers. If you feel tired, get off the road; don't try to get home faster.

Distracted driving kills and injures thousands of people each year. You can help make a difference by taking a pledge to drive distraction-free today. Keep yourself and your passengers safe on while the road. ♦



DRINKING WATER QUALITY SAMPLING



Drinking water quality testing will begin in June. This is part of EHS's new strategic program to test all drinking water sources on campus every two years in buildings built prior to 1991. The goal is to identify potential elevated lead concentrations. Drinking water sources include drinking fountains, bottle fillers and bathroom/kitchen sinks. Any fixtures that are found to have elevated lead results will be removed from service until a solution for repair can be made.

The CMU Drinking Water Quality Program, along with a summary of sampling results, is available on the EHS website under [Workplace and Construction>Water Quality Management](#). ♦

SMOKING ON CAMPUS

In support of the university's Smoke Less Policy, EHS will be replacing the smoking urns located in the updated and reduced designated smoking locations that went into effect last summer. This will occur over the next several weeks with the support of Facilities Management. ♦

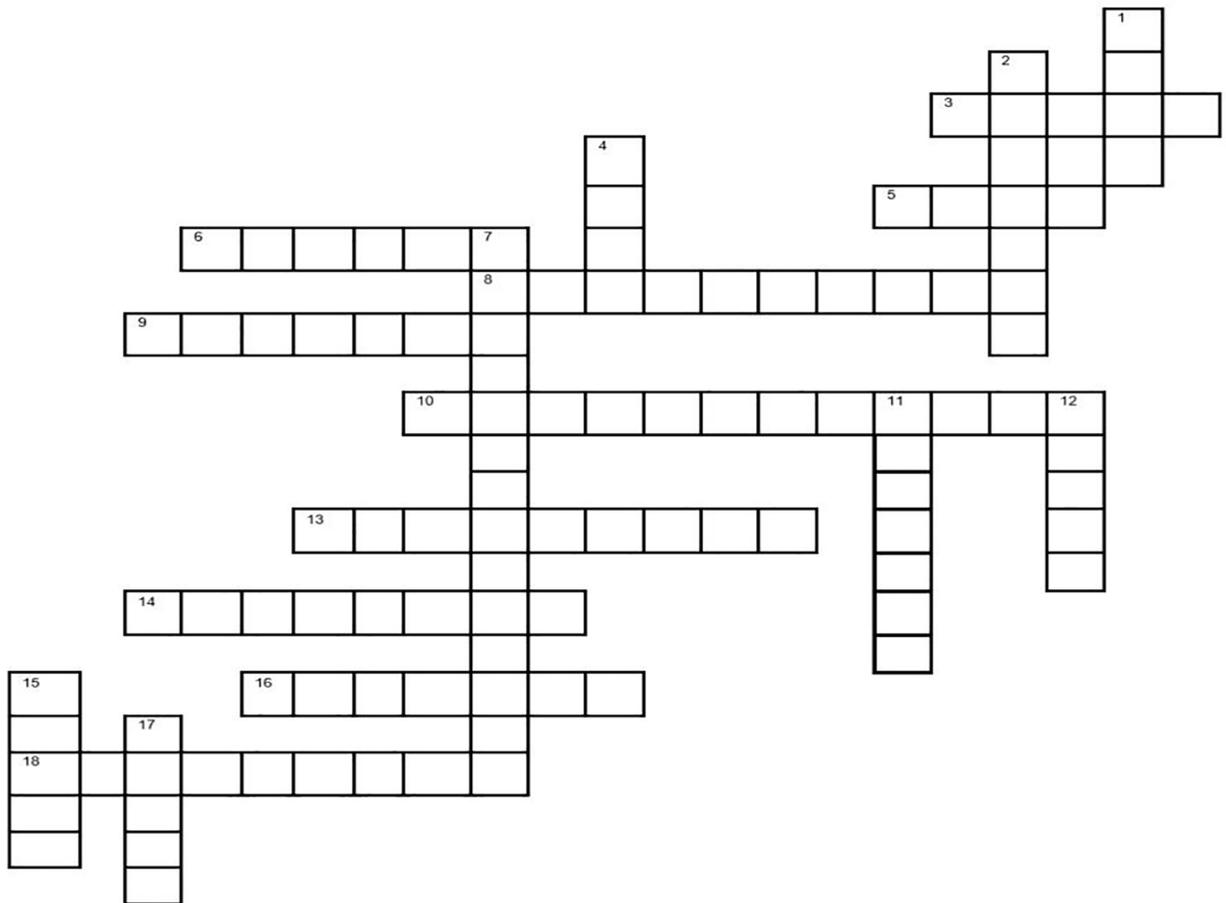


EHS STAFF SPOTLIGHT



Dr. Neha Chawla received a Ph.D. and M.S. in Materials Science and Engineering at Florida International University. Her research focus was on developing cathode materials for advanced battery systems. She has published over 20 research papers, has presented at several national and international conferences and is the reviewer for many impactful journals. She has Bachelors in Production Engineering from Mumbai University in India. She joined Carnegie Mellon University as an EHS Research Specialist in August 2018. She oversees the lab inspections and conducts safety trainings. She recently published the paper titled, "Recent Advances in Non-flammable Electrolytes for Safer Lithium-ion Batteries" in *Batteries Journal* that focusses on the research conducted on the lithium-ion batteries for making them safer and non-flammable. ♦

CROSSWORD PUZZLE



Across

3. Do not ____ fire escape passageways and firefighting equipment
5. It's easy to remember how to use a fire extinguisher if you remember the word ____
6. Close one ____ in a filing cabinet before opening another
8. ____ is matching the job to the worker
9. Spilled liquids create ____ and need to be cleaned up immediately
10. We can prevent slips, trips and falls by maintaining good ____
13. Reporting unsafe acts and unsafe conditions can often help prevent ____
14. When climbing stairs, use the ____
16. Don't read while walking. It doesn't save enough time to ____ the risk
18. The best time to prepare for an ____ is before it happens

Down

1. When carrying an object, keep your ____ straight
2. During an emergency you should use the exit ____ to you
4. Do not overload electrical circuits. Use only one ____ for each socket
7. It is our ____ to work safely and report hazards
11. Whether you are sitting, standing or lifting, use proper ____ to avoid muscle strain
12. Never let your ____ down on safety
15. Scan ____ while you walk and remove hazards that you encounter
17. Store ____ items in lower drawers or on lower shelves

Answers will be provided in the next EHS Quarterly Newsletter.

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, EHS Training and Communications Specialist at: msickles@andrew.cmu.edu. ♦

