

Environmental Health & Safety

**Safety** BEACON

www.udel.edu/ehs  
302-831-8475

**Free Face Masks to UD Campus**

*EHS is here to help!*



Sourced: <https://sites.udel.edu/studentwellness/project/ud-protect-the-flock-student-wellbeing-ambassador-program/>

**Here's what you need to know:**

- Wearing a face mask is no longer required indoors in non-classroom spaces, including research labs, offices, athletic event spaces and hallways
- Face masks continue to be required inside all classroom settings, child-care facilities and while using UD-sponsored transportation.
- Those who are speaking in front of a class may remove their masks if they are up to date with COVID-19 vaccinations and are at least 6 feet away from others.
- Face masks are still required in all healthcare and clinical areas, including all COVID testing locations.

**Types of masks UD offers:**

- Disposable KN95 masks: KN95 masks can provide better protection (with a good fit) than other styles of masks.
- Surgical style masks worn under cloth face masks can provide better protection than either alone. EHS has surgical style disposable face masks available for those persons that can't achieve a good fit with the KN95 masks – generally those with smaller faces.

Continued on Page 2

Environmental Health and Safety (EHS) will continue to coordinate the distribution of these masks and other COVID prevention supplies – disinfectant wipes, hand sanitizer bottles, gloves, N95 respirators (Healthcare and UDPD only) to each department/unit on campus.

Faculty and staff can continue to obtain supplies through their HR liaisons, business administrators, building managers and/ or safety committee chairs by using the linked form <https://www.formstack.com/forms/?4024671-LQ928QPNPX> (This form is not to be used for individual personal orders)

Environmental Health and Safety will notify the Department Representative when their order is ready for curbside pickup at the General Services Building, 222 South Chapel Street.

### **What about students needing masks?**

- Resident students can obtain masks through their Residence Hall staff
- Non-resident students with a valid UD ID can obtain masks at the following locations:
  - Trabant University Center
  - Perkins Student Center
  - Morris Library
  - Carpenter Sports Building
  - STAR Campus Health Administration Building- front desk

If you have any questions or concerns regarding COVID mask supply on campus, please email UD's Safety Officer, John Verdi at [verdij@udel.edu](mailto:verdij@udel.edu)

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## **All I Need is the Air I Breathe...**

### *A Word on Air Quality*

Ever get a burning sensation in the back of your throat on hot, hazy days? You may be feeling the effects of ground-level ozone.

Ground-level ozone is a real threat to our health because it reacts with sensitive lung tissue, causing harmful changes in breathing passages. Children, the elderly, and individuals with respiratory diseases are especially harmed by ozone. Even healthy individuals can be harmed if they attempt strenuous activity on days with high ozone...those days should be used for indoor, low physical stress activity.

Ground-level ozone is created when volatile organic compounds (VOCs) in the air interact with ultraviolet (UV) light. There's not much we can do about UV rays, but we can all help reduce VOCs in the air:

Limit daytime driving: combine errands, carpool, or even walk or bicycle.

Postpone use of gasoline-powered lawn mowing until the evening.

Refuel your car at night and don't top off your tank.

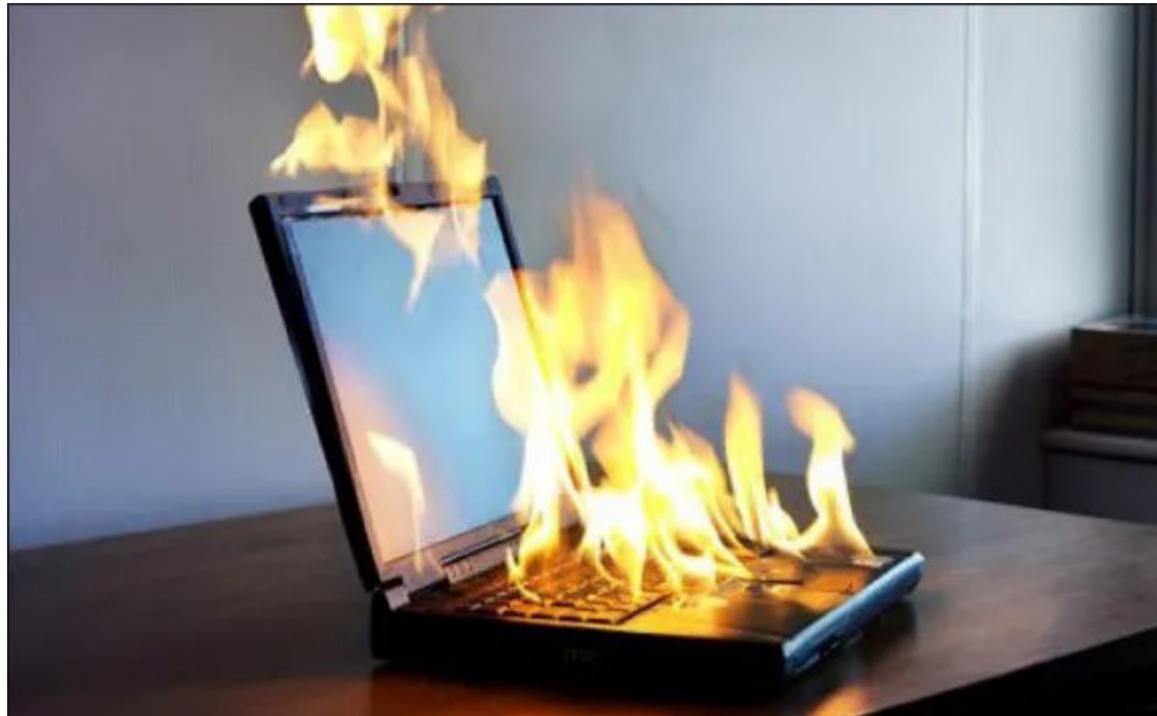
Avoid idling your car and jackrabbit starts

Use latex paints and water-based cleaners

Before you plan your day's activities, you can check the Air Quality Forecast at: [www.airnow.gov](http://www.airnow.gov)

# Charging Lithium-Ion Batteries on Campus?

*Read this article first!*



EHS's Fire Safety Team has firsthand experience with fires involving some form of lithium-ion charging during research work on campus. Each incident was quite dynamic in the amount of damage that occurred, and the difficulty to extinguish the fires varied.

## **Recent documented lithium-ion battery incidents on campus**

- July 2013- Spencer Lab, a battery pack caught fire while charging
- August 2014- Spencer Lab, a battery test stand caught fire (see photo below)
- June 2019- Otis Smith Lab at Lewes Campus, a battery caught fire during movement by a researcher
- June 2020- Star Campus, a battery charging an H-2 Bus caught fire causing major damage

Standard Operating Procedures written by departments using lithium-ion charging are required. EHS reviews these procedures to ensure that the equipment/appliances are UL listed and that protective measures and supervision are in place while charging is being performed.



Fire damage at Spencer Lab from a lithium-ion battery test stand

continued on page 4

## Hazards of Concern

The hazards associated with lithium-ion batteries, especially during charging, include thermal runaway along with the toxic gases and smoke that are emitted during the process.

Thermal Runaway: Thermal runaway is a chain reaction of rapidly increasing temperature in an overheated battery, which can be disastrous. Thermal runaway can occur in any type of battery that has been damaged or mis-handled and is one of the biggest safety risks associated with industrial batteries.

While all the past incidents mentioned were research related, the potential exists for similar results in home and on-campus housing applications.

Currently, the Residence Hall Regulations includes the following policy at this link: <https://www.udel.edu/students/reslife/housing-info/our-policies/#regulations>

## Residence Hall Prohibited Items

- Electronic skateboards, including hoverboards and other similar types of equipment (e.g. Segways) are banned for use, storage, and charging.
- Charging cellular telephones and tablets is permitted within residence rooms but needs to follow manufacturer's recommendation/instructions. Below are recommendations when charging appliances using lithium-ion batteries.

## Charging Guidelines

- Charge at a moderate temperature. Do not charge at freezing temperature.
- Lithium-ion batteries do not need to be fully charged; a partial charge is better.
- Not all chargers apply a full topping charge and the battery may not be fully charged when the "ready" signal appears; a 100 percent charge on a fuel gauge may be a lie.
- Discontinue using charger and/or battery if the battery gets excessively warm.
- Apply some charge to an empty battery before storing (40–50%)

## Purchasing Guidelines

- Always seek reliable products by Looking for the Safety Certification. UL listings through testing recognizes defects in battery design are the cause of a lot of safety hazards, so it's important to know that the batteries you're using have been vetted to meet nationally recognized safety standards. Underwriters Laboratories (UL) is a global safety certification company that performs OSHA-approved safety testing for lithium-ion batteries.
- If a battery is UL Listed, that means it has been tested and found to be safe under simulated conditions of potential mishandling or damage. UL Listed differs from UL Recognized in that UL Listed products are complete products, whereas UL Recognized just means it was tested as a component of a finished product and must be factory installed. One of the best ways to manage risk for lithium-ion battery safety is to make sure batteries are UL Listed. as per "Battery Academy"

## Moving Forward

As the demands for products utilizing lithium-ion batteries grows, we need to be familiar with the hazards and danger associated with their charging and prepare our buildings to safely accommodate the charging needs of our researchers and residents.

For more information, contact Kevin McSweeney, EHS Campus Fire Marshal [kmcsween@udel.edu](mailto:kmcsween@udel.edu).

# Ergonomics

## *Working from home shouldn't be a pain in the neck!*

Over the past two years, the pandemic has proven a variety of challenges for employees. Established employees abruptly transitioned to working remotely from home. Newer employees were trying to gain their footing adjusting to their job duties, departments, and the University in lieu of the traditional office setting that they would ordinarily experience. Whether you're an established or a new employee, the ergonomic set up of your workstation plays a significant part in how you feel at the end of the day. How you're feeling can be effectively treated in part through ergonomic adjustments in your workspaces at home and at work.

It is better to be proactive rather than reactive with your workstation set up – use ergonomic guidelines before feeling any pain rather than waiting until you're hurting and having to try to reduce/eliminate the pain. Proper sitting posture, distance/height of monitor, keyboard height, repetitive motions (typing, twisting/turning to file items, etc.), and taking breaks are key factors to remember in order to be fully comfortable while working and being productive. The following are important ergonomic factors to use while working.

- Ensure that you are sitting fully in your chair to obtain support, especially for your back. Use a chair that allows your feet to be flat on the floor; if unable to do so, and you don't have a footrest, an empty box top or reams of paper can be used for foot support.
- If using a laptop, raise the height of your screen to help maintain an upright position rather than hunching over to look at the screen. With the laptop being higher, use an external keyboard and mouse to achieve the neutral wrist position. Alternatively, use the laptop as a docking station, connecting it to a standard computer monitor, keyboard, and mouse.
- Remember that it is most important to take periodic breaks while working at the computer. Routinely look away from your monitor to give your eyes a rest, while doing some gentle stretches. In addition to these micro-breaks, stand up and move around every hour.
- With the use of tablets and cell phones constantly increasing, it is important to remember proper ergonomics when using these devices to avoid 'cell phone slump.' The greater the head tilt, the greater the pressure on neck and shoulders. Avoid tilting your head downward by raising the height of your tablet/phone.

Using and maintaining good ergonomic practices and routine will help in overall productivity and well-being. Environmental Health & Safety provides an ergonomic program to University employees. This is a free on-campus program that provides one-on-one evaluations, trainings and presentations, and a chair/ergonomic equipment loan program.

More information can be found at: <https://www1.udel.edu/ehs/generalhs/indhygiene/ergonomics.html>.

Questions and requests can be directed to Ann Woodall at [woodall@udel.edu](mailto:woodall@udel.edu).

# UD Recertified as HEARTSafe Campus



The University of Delaware was recertified as a HEARTSafe Campus last month by the National Collegiate Emergency Medical Services Foundation (NCEMSF), American Heart Association, HEARTSAFE Communities, and Sudden Cardiac Arrest Foundation. The recognition program was developed to focus on public cardiopulmonary resuscitation (CPR) training and rapid access to automated external defibrillators (AEDs) at academic institutions.

According to NCEMSF, the cornerstone of any HEARTSafe Campus is a vibrant campus-based emergency medical response organization, along with rapid public access to defibrillation, early access to advanced care, and public CPR and AED training. To qualify for the award, UD completed and submitted a rigorous self-assessment and verification packet and fulfilled all required criteria to improve the chances that anyone suffering a sudden cardiac arrest will have the best possible chance for survival.

You will see red, white and blue stickers with the words “HEARTSafe Campus- AED Equipped Building” on the entrances to buildings on the Newark campus, Hugh R. Sharp Campus in Lewes, Georgetown, and Wilmington campuses. The presence of the sticker indicates that the building houses at least one AED unit, which can be used in the event of a cardiac arrest to help restart an individual’s heart. In addition to the buildings, all UD Police cars and the University ambulance are also equipped with the devices.

For a complete list of AEDs on campus, go to <http://www1.udel.edu/ehs/generalhs/aed-locations.html> or check the Campus Maps for buildings that have a heart symbol on them. If you click on the heart symbol, you will see the specific location of the AED within that building.

For more information on CPR classes or the AED program, visit UD’s Environmental Health and Safety website, <https://www1.udel.edu/ehs/>



HEARTsafe Campus Sticker



Members of UD Emergency Care Unit  
with recognition certificate

# Laboratory Doors on Campus

## *“Open door policy” takes on a different meaning*

Do you prop open your lab door or leave the door leaf open? What could be wrong with that?

Laboratory doors need to remain closed. It's as simple as that. Your laboratory door has many purposes, some of which you may not be considering when you leave it open. There are three primary functions for your lab door (1) to maintain the proper air balancing and ventilation in the laboratory, (2) to provide a smoke and fire barrier between the laboratory and egress hallways, and (3) to secure your laboratory equipment and chemicals.



Figure 1. Laboratory Ventilation, Fire Doors, and Locked Lab doors

References: Laboratory ventilation image: <https://www.hemcocorp.com/images/hoodvent%20images/ventilation3.jpg>  
Fire Door image: <https://www.vectorstock.com/royalty-free-vector/fire-door-vector-89050>

**Laboratory Ventilation:** Proper laboratory ventilation is essential in keeping researchers safe as they use chemicals. When the laboratory is balanced correctly, there is an air exchange rate (the amount of “new” air in the lab) of 8-12 times per hour. A properly performing chemical laboratory is also “negative” relative to egress hallways. A negative laboratory will pull fresh air from the hallway, keeping all chemical vapors inside the room. A positive lab would have the opposite effect and push chemical vapors out into the hallway. An open laboratory door causes problems because not all labs “pull” the same amount of air from the hallway. For example, suppose there are two adjacent labs with open doors. In that case, one lab could pull laboratory air from the neighboring lab into the hallway, leaving building occupants susceptible to chemical exposure.

**Fire and Smoke Barrier:** Unfortunately, accidents happen, whether a chemical spill or faulty laboratory equipment leading to a fire. A laboratory door provides the essential barrier to keep any unexpected hazard in the room and away from egress hallways. Laboratory doors are designed with a fire rating to ensure that any fire in the lab remains contained long enough to allow building occupants to vacate the building safely. If a fire occurs in a lab while a door is propped open, smoke or fire can more easily find its way into the hallway and make evacuation extremely difficult.

**Security:** A secured laboratory leads to a safe university community. All chemicals, needles, and syringes are required by law to be under lock and key. Your laboratory doors should remain closed, but they should also be locked when not actively supervised. A common excuse for leaving doors open is that individuals transferring chemicals do not want to contaminate doors or personal belongings when reaching for keys. If this is the case, an easy solution is to use a cart or bottle carrier to transport materials – the single glove technique is required when touching any door or handle. Also, be vigilant; if you ever notice someone in your lab you do not recognize, please ask if they need assistance or call UDPD.

## Did you know...

*Chemical Safety Moments get published every month!*

If you would like past copies, please scan the QR code below or visit the URL: <https://l.ead.me/bcMFxO>



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### **Environmental Health and Safety would like to hear from you!**

We encourage all members of the UD community to submit safety improvement ideas on campus.

You may submit ideas that impact your personal safety here 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 via email to [dehsafety@udel.edu](mailto:dehsafety@udel.edu)

