DURHAM TECH

ANNUAL SAFETY UPDATE

Hazmat Review and Emergency Evacuation Procedures Training

STUDENT VERSION

Public Safety Department

Updated 1/05/2019 LWS, 1/9/2019 LF

This training will cover:

- ✓ Chemical Right-To-Know short summary
- ✓ Preparedness Before an Emergency
- ✓ Evacuation Procedures
- ✓ Emergency Procedures
- ✓ Where to get Answers to Questions
- ✓ Additional Resources
- ✓ Registering Training Completion (if required)

Note: right click web links and open in another tab or window. You can also press these 3 keys at the same time (CTRL-ALT-TAB) to display other hidden windows. Press only the TAB key to select the window you want then press ENTER. Switch back to this training the same way.

Hazard Communication Review

Your "Right to Know"

- OSHA Required Training, *Hazard Communication Standard* – "Right to Know," is required for anyone that might come into contact with chemicals in the workplace.
- Focus Group: Students that want a summary of the Hazard Communication: Right to Understand (GHS) standard.
- Purpose: To familiarize students with hazardous materials, warning labels, and where to get chemical information in the form of Safety Data Sheets (SDS).

(right click on links to open them in a new window)

What is a CHEMICAL?

- Chemical substances may be defined as any material with a definite chemical composition*. For the purpose of this training, we include mixtures of chemicals.
- Chemicals are in everything from the air we breathe, the foods you consume, and the clothes we wear. Water is a chemical (formula: H_2O – see image below).
- Distinct substances have properties that can determine how we use them or when they can make us sick.

*Source: Wikipedia

Knowing Chemical Information is Important

- All chemicals can be TOXIC – dangerous at concentrations above a certain level. Even water can make us sick or kill us if we drink too much.

- (Material) Safety Data Sheets, referred to as “SDS” in the remainder of this presentation, provide official safety information on chemicals.
- Durham Tech has an SDS for every hazardous substance you use.
- Access Safety Data Sheets in the Environmental Health and Safety section on the Durham Tech Campus Police and Public Safety home page.

(right click on links to open them in a new window)

Safety Data Sheets (SDS)

They describe the hazards and properties of substances.
They do not contain all the information known about a substance.

Refer to an SDS for information about a substance's:

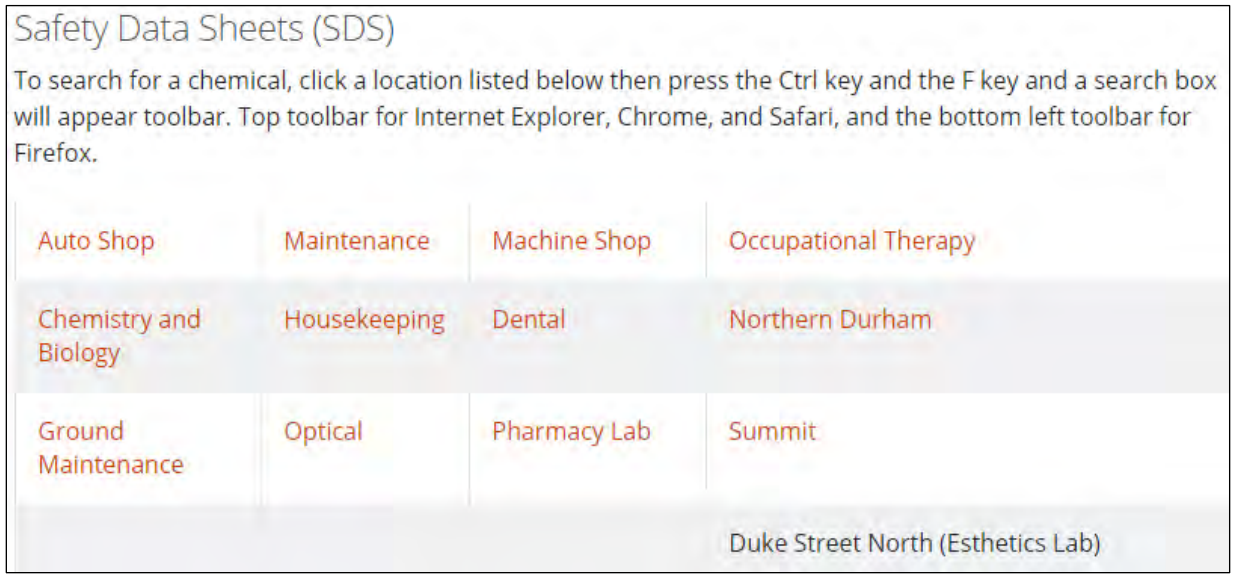
- Company Information
- Hazardous Ingredients
- Physical Data
- Fire and Explosion Data
- Health Hazard Data
- Reactivity Data
- Spill and Leak Procedures
- Special Protection Information
- Special Precautions

Safety Data Sheets replaced Material Safety Data Sheets (MSDS)s after 2014.

Accessing Durham Tech Safety Data Sheets

(right click on links to open them in a new window)

- From the Durham Tech home page, scroll to the links section near the bottom and click the Emergency/Weather link. Then select Environmental Health and Safety from the left menu.
- Safety Data Sheets (SDS) are grouped by location or program. For example, click "*Auto Shop*" if you want to access those safety data sheets.



Safety Data Sheets (SDS)

To search for a chemical, click a location listed below then press the Ctrl key and the F key and a search box will appear toolbar. Top toolbar for Internet Explorer, Chrome, and Safari, and the bottom left toolbar for Firefox.

Auto Shop	Maintenance	Machine Shop	Occupational Therapy
Chemistry and Biology	Housekeeping	Dental	Northern Durham
Ground Maintenance	Optical	Pharmacy Lab	Summit
			Duke Street North (Esthetics Lab)

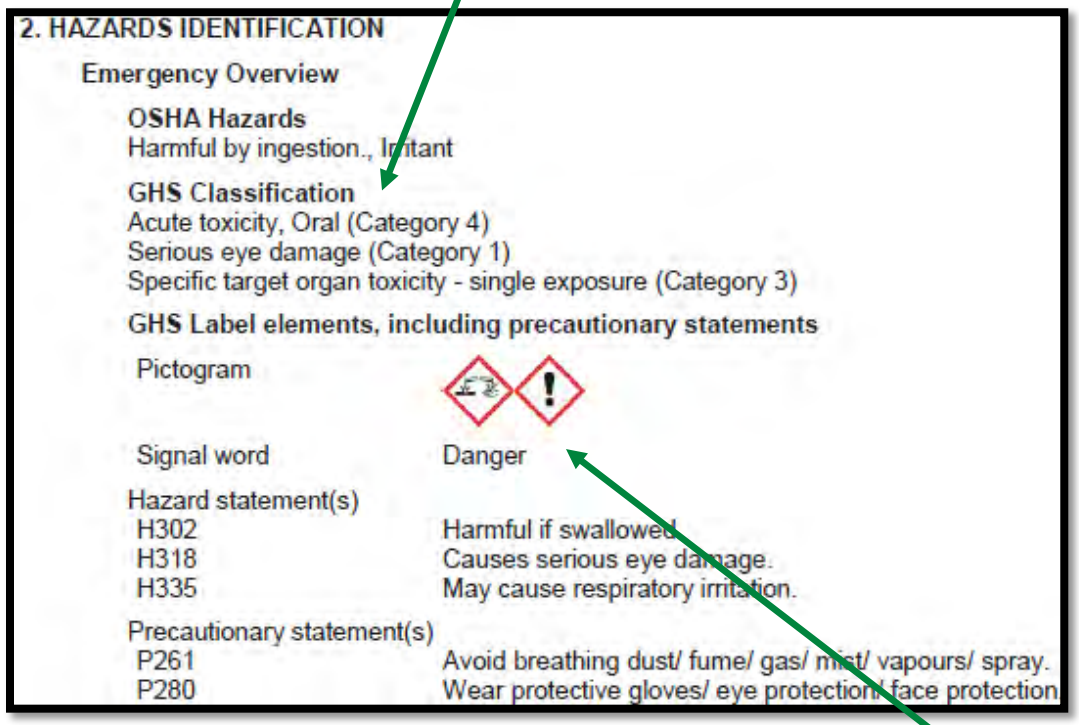
Searching for SDS Information

(right click on links to open them in a new window)

1. As an example, go to the Chemistry and Biology location
2. Type *Ctrl-F* to search. (A search box will appear at the top or bottom of the browser window)
3. Type part of the name or CAS# - the first 'hit' will be highlighted (CAS numbers are on chemical bottles and in lab write-ups)
   – If you are doing this example type "succinic"
4. Press the *Enter* key to go to the next match
   – do so until you find "Succinic anhydride"
5. Click the link for the SDS document that you wish to view.
   – for example, the SDS for Succinic Anhydride

What SDS Category Hazard Numbers Mean

The partial SDS is for Succinic Anhydride.
Under the new GHS Classification:
Category 1 is the highest: Severe Danger
while Category 4 is the lowest



2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Harmful by ingestion., Irritant

GHS Classification
Acute toxicity, Oral (Category 4)
Serious eye damage (Category 1)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word — Danger

Hazard statement(s)

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Precautionary statement(s)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ eye protection/ face protection.

Under GHS Label Elements, there are PICTOGRAMS and SIGNAL Words: DANGER and WARNING (blank is also used.) Danger is greater than Warning.

NFPA Triangle and HMIS Rating Numbers

These labels may be found on doors and outside walls of shops, labs, trucks, train-cars, buildings, or individual chemical containers. NFPA Triangle and HMIS ratings are from 0 to 4 and use colors to represent the hazard class.

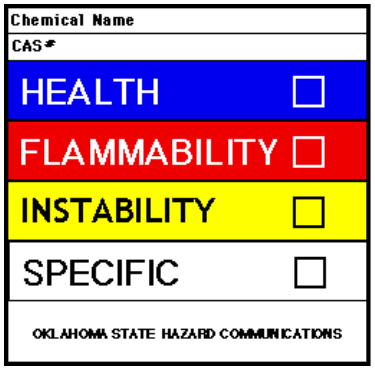
Ratings are from 0 to 4:

- 0 is the lowest: not hazardous
- 4 is the highest: **Severe Danger!**
- **Note:** they are **opposite** of SDS category ratings where 1 is the highest and 4 the lowest.

Colors represent hazard class:

- Red = Flammability
- Blue = Health
- Yellow = Instability
- White = Special hazard like
  - o ~~W~~ = water reactive
  - o Ox = oxidizer

Example: HMIS Label without ratings:



Example: NFPA Label with ratings

This label corresponds to the chemical Acetyl Chloride: Highly flammable (red 3), severe skin and eye burns (blue 3), unstable when heated (yellow 2), water reactive (~~W~~ symbol at bottom).

Labeling Containers

- **Never** leave any unattended, unlabeled containers of hazardous chemicals at work or at home
- **Never** use food containers for storage of hazardous chemicals
- **Always** label any container unless immediately using
- **Use GHS labels** for chemical storage
- If you need help with an unlabeled container, talk to your instructor, supervisor, or the Safety Compliance Advisor.

(right click on links to open them in a new window)

SDS Label Pictograms Signify Hazards

Explosives,
Self-reactives

Gases under pressure

Oxiders

Corrosive,
Eye damage

Aquatic toxicity

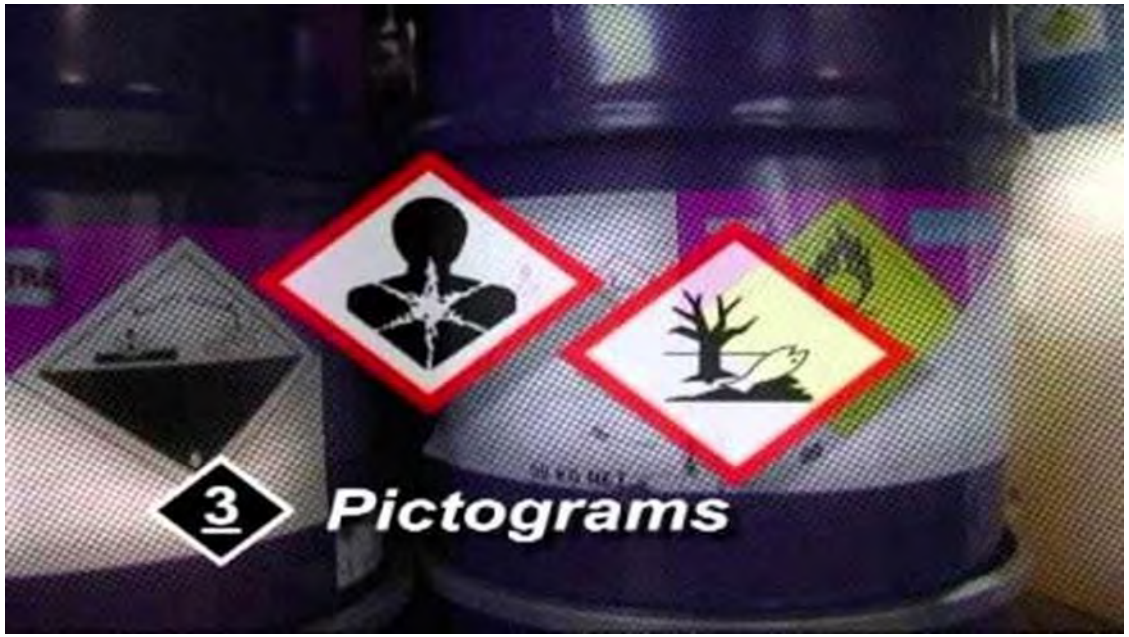
Poison, Highly toxic,
Fatal

Systemic Effects:
Carcinogen,
Mutagen,
Reproductive
toxicity,
Respiratory sensitizer,
Target organ toxicity,
Aspiration toxin

Flammables,
Pyrophoric,
Organic peroxides

Irritant,
Skin sensitizer,
Low toxicity,
Narcotic effects

GHS Labeling YouTube Video



Watch this 2-minute video for more information about GHS Labels (optional)

(right click on link to open in a new window)

Hazard Communication

- Safety is first **YOUR** responsibility.
- You are responsible for learning the hazards, and using personal protective equipment (PPE), and safe procedures if working with hazardous materials.
- Your **Instructor** is responsible for their student's specific safety orientation. They are responsible for informing you of hazards and ensuring that you work in a safe manner.
- The Durham Tech **Safety Compliance Advisor** may also be consulted with questions or concerns.

Personal Protective Equipment (PPE)

Wear required PPE, which helps protect you from chemical and physical hazards:

- Eyewear (safety glasses, goggles, face shields)
- Gloves (hot-cold, electrical, chemical)
- Aprons, lab coats
- Hearing protection
- Breathing protection (respirators, dust masks, hoods)
- Safety shoes (closed toe, steel toe)
- Hard hats

When in Labs or Shops:

Always follow your lab's rules for PPE and food restrictions.

- Wear required eyewear even if the instructor does not. They are **your eyes** – keep them safe!

- Use **gloves** to protect your hands! They may protect you from a chemical exposure, a cut or other hazards.

- **No food or drink** in labs.
- Don't put your backpacks on the floor or benchtop which may be contaminated.

These help protect you from physical and chemical hazards!

Hazard Communication: The Written Plan

You have a right to possess your own copy of Durham Tech's written hazard communications plan (Health and Safety Manual). Updated at least yearly, it is available on the Durham Tech Environmental Health and Safety web page.

You have completed the “Right-to-Know” review.

You should have:

- Reviewed the definition of a Hazardous Material.
- Reviewed warning labels and hazard categories and levels.
- Reviewed the meaning of GHS Pictogram Symbols.
- Reviewed how to access Safety Data Sheets (SDS) on the Durham Tech website.
- Reviewed where to find safety information on an SDS
- Reviewed Personal Protective Equipment (PPE).
- Reviewed where to find the college’s Health and Safety Manual.

To Complete This Part of Your Training
Take This 3 Question Test

Use buttons for the test – do not scroll

Use this button if you want to restart the test

Question 1: click the correct response

1. What is the purpose of an SDS?

It protects you from illegal or hazardous form of the substance

It describes the hazards and properties of substances

It contains all the information available about a substance

It tests your knowledge about a chemical or substance.

Back

INCORRECT – REVIEW and TRY AGAIN

Review: **Safety Data Sheets (SDS)**

They describe the hazards and properties of substances.
They do not contain all the information known about a substance.

Refer to an SDS for information about a substance's:

- Company Information
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- Physical Data
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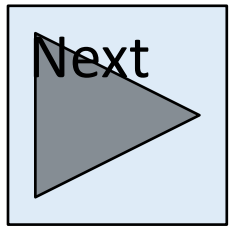
- Special Protection Information
- Special Precautions

Safety Data Sheets replaced Material Safety Data Sheets (MSDS)s after 2014.

Question 1: CORRECT!

1. What is the purpose of an SDS?

It describes the hazards and properties of substances



Question 2: click the correct response

2. Which statement is false?

All chemicals can be dangerous. SDS describe the hazards and properties of substances

Personal Protective Equipment (PPE) helps protect you from chemical hazards.

Safety is first your instructor's responsibility.

If I have a safety question, I can contact the Safety Officer for help.

Back

INCORRECT – REVIEW and TRY AGAIN

The statement is TRUE:

All chemicals can be dangerous.

- Even water can make you sick or kill you if you drink too much.

SDS's describe the hazards and properties of substances.

Back

INCORRECT – REVIEW and TRY AGAIN

The statement is TRUE:

If you have a question about safety:

- **you can contact the Safety Officer for help. You can also ask your instructor.**

For emergencies, call 911 or 5555 from any Durham Tech phone or call 919-536-7255 (option 1) for the Durham Tech Police.

Back

INCORRECT – REVIEW and TRY AGAIN

The statement is TRUE:

Personal Protective Equipment (PPE):

helps protect you from chemical hazards.

- Eyewear (safety glasses, goggles, face shields)
- Gloves (hot-cold, electrical, chemical)
- Aprons, lab coats
- Hearing protection
- Breathing protection (respirators, dust masks, hoods)
- Safety shoes (closed toe, steel toe)
- Hard hats

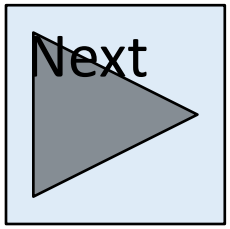
Question 2: CORRECT!

2. Which statement is false?

Safety is first your instructor's responsibility.

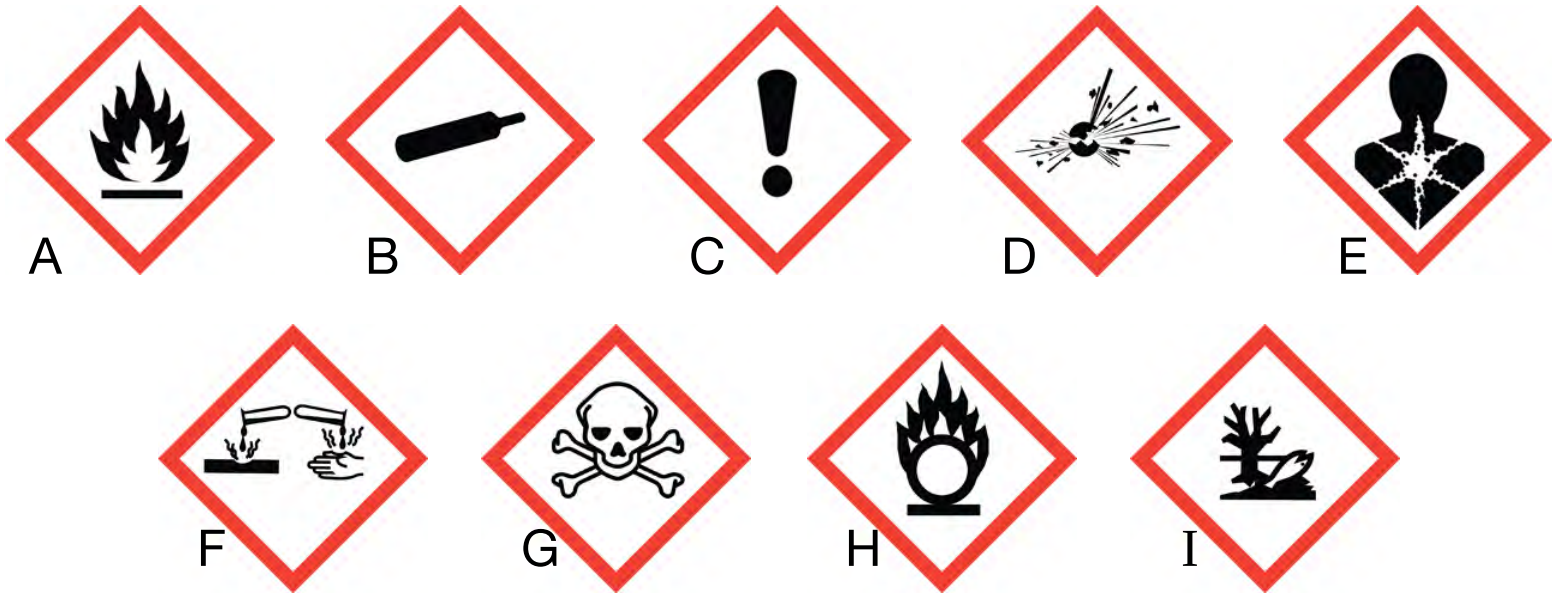
FALSE! Safety is first **your** responsibility!

You are responsible for learning the hazards and using personal protective equipment (PPE) and safe procedures if working with hazardous materials. Your instructor is responsible for providing you with hazard information and observing you work in a safe manner.



Question 3: click the correct Pictogram

3. Which Pictogram represents **Poison! Or Highly Toxic!**



Click the correct answer.

Back

INCORRECT – REVIEW and TRY AGAIN

Review: **Chemical Label Pictogram Hazards**

Explosives,
Self-reactives

Gases under
pressure

Oxiders

Corrosive,
Eye damage

Aquatic toxicity

Poison, Highly toxic,
Fatal

Systemic Effects:
Carcinogen, Mutagen,
Reproductive
toxicity,
Respiratory sensitizer,
Target organ
toxicity,
Aspiration toxin

Flammables,
Pyrophoric,
Organic peroxides

Irritant,
Skin sensitizer,
Low toxicity,
Narcotic effects

Question 3: CORRECT!

3. Which Pictogram represents **Poison! Or Highly Toxic!**

G

The skull & crossbones represents Poison or Highly Toxic Hazard!

Next

You Completed the “Right-To-Know” Review

✓ Chemical Right-To-Know short summary

THE LAST SECTION COVERS:

- Preparedness Before an Emergency
- Evacuation Procedures
- Emergency Procedures
- Where to get Answers to Questions
- Additional Resources
- Registering Training Completion (if required)

Be Prepared Before an Emergency

Advanced preparation plays a vital role in ensuring that you have the necessary knowledge to know where to go and how to keep yourself safe when an emergency occurs.

- Review the **Evacuation Plan** poster for the building you are in. Be familiar with the **Emergency Medical Protocols** and **Emergency Response Checklist** posters. These are posted in all classrooms, labs, and in hallways.

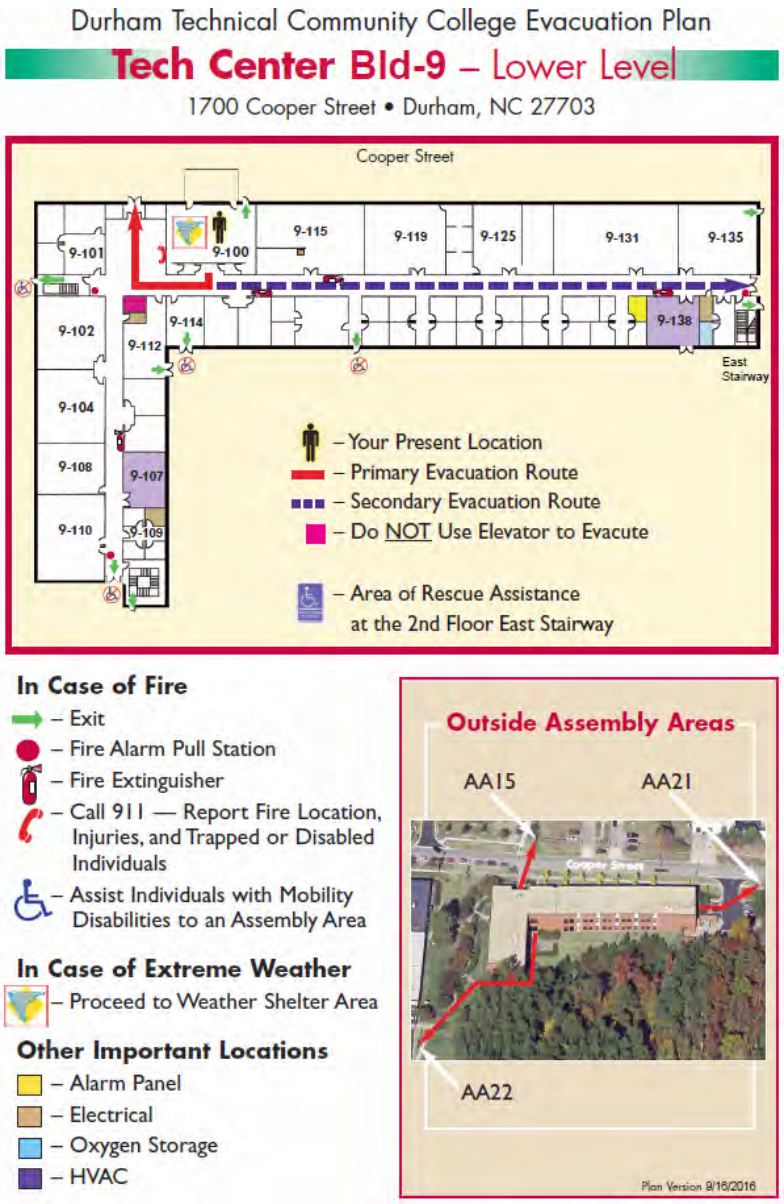
- Know the location of the nearest fire alarm pull station, your primary and secondary evacuation routes, your weather shelter area, and outside assembly areas.

Evacuation Plan

Each location has its own primary and secondary evacuation route.

Note these locations:

- Fire alarm pull stations and emergency equipment symbols
- Weather shelter areas are on the ground floor. Some internal rooms may also have this shelter sticker.
- Outside assembly areas

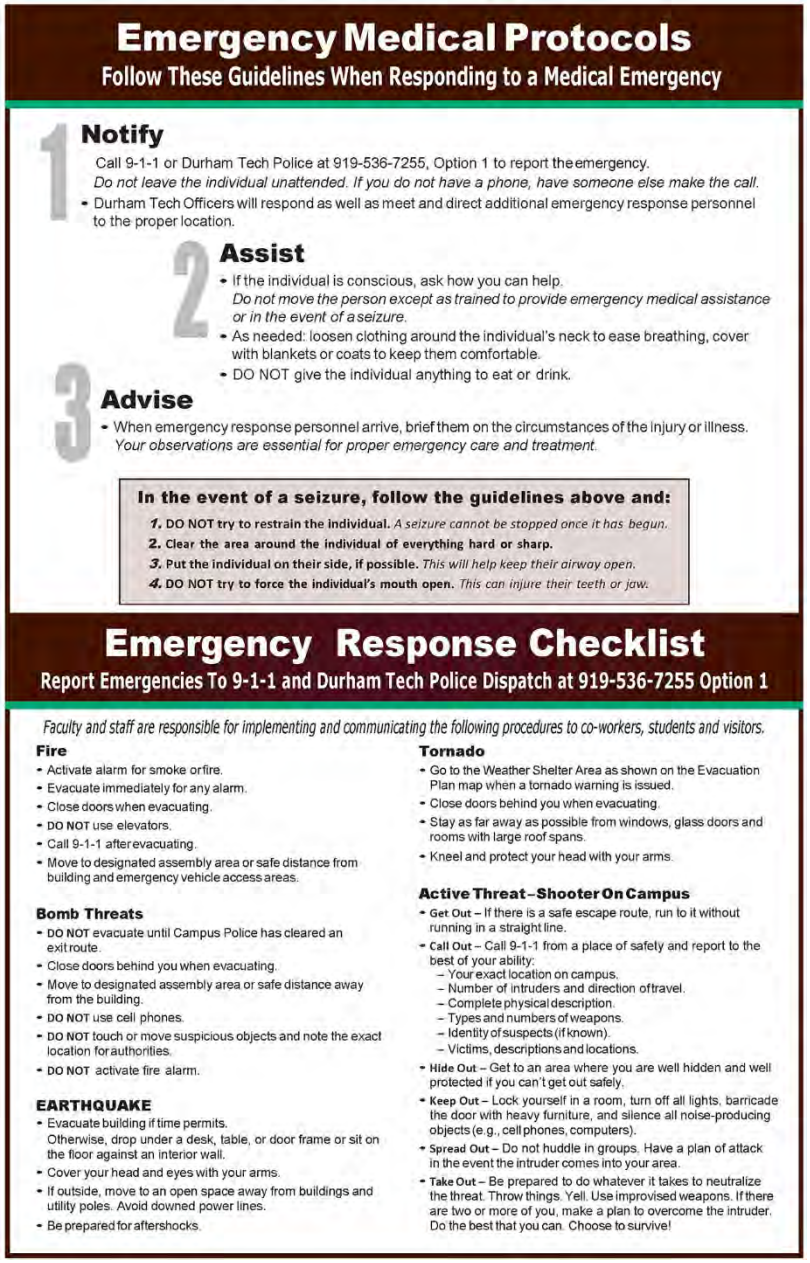


Note: Posters with old room numbering will be replaced with updated posters.

Medical Protocols and Emergency Response Checklist

- Phone numbers to call in an emergency.
- Basics of what to do in emergency situations.
- Add Durham Tech Police Dispatch to your cell phone contacts: 919-536-7255,,1 (the commas create a pause)
- Update your contact and emergency information in Self Service. Optionally, sign up for the "Durham Notify Me" emergency notification system.

(Right click on this link to open the checklist in a new window)



Emergency Medical Protocols

Follow These Guidelines When Responding to a Medical Emergency

1 Notify

Call 9-1-1 or Durham Tech Police at 919-536-7255, Option 1 to report the emergency.
Do not leave the individual unattended. If you do not have a phone, have someone else make the call.

- Durham Tech Officers will respond as well as meet and direct additional emergency response personnel to the proper location.

2 Assist

- If the individual is conscious, ask how you can help.
  Do not move the person except as trained to provide emergency medical assistance or in the event of a seizure.
- As needed: loosen clothing around the individual's neck to ease breathing, cover with blankets or coats to keep them comfortable.
- DO NOT give the individual anything to eat or drink.

3 Advise

- When emergency response personnel arrive, brief them on the circumstances of the injury or illness.
  Your observations are essential for proper emergency care and treatment.

In the event of a seizure, follow the guidelines above and:

1. **DO NOT try to restrain the individual.** *A seizure cannot be stopped once it has begun.*
2. **Clear the area around the individual of everything hard or sharp.**
3. **Put the individual on their side, if possible.** *This will help keep their airway open.*
4. **DO NOT try to force the individual's mouth open.** *This can injure their teeth or jaw.*

Emergency Response Checklist

Report Emergencies To 9-1-1 and Durham Tech Police Dispatch at 919-536-7255 Option 1

Faculty and staff are responsible for implementing and communicating the following procedures to co-workers, students and visitors.

Fire

- Activate alarm for smoke or fire.
- Evacuate immediately for any alarm.
- Close doors when evacuating.
- DO NOT use elevators.
- Call 9-1-1 after evacuating.
- Move to designated assembly area or safe distance from building and emergency vehicle access areas.

Bomb Threats

- DO NOT evacuate until Campus Police has cleared an exit route.
- Close doors behind you when evacuating.
- Move to designated assembly area or safe distance away from the building.
- DO NOT use cell phones.
- DO NOT touch or move suspicious objects and note the exact location for authorities.
- DO NOT activate fire alarm.

EARTHQUAKE

- Evacuate building if time permits. Otherwise, drop under a desk, table, or door frame or sit on the floor against an interior wall.
- Cover your head and eyes with your arms.
- If outside, move to an open space away from buildings and utility poles. Avoid downed power lines.
- Be prepared for aftershocks.

Tornado

- Go to the Weather Shelter Area as shown on the Evacuation Plan map when a tornado warning is issued.
- Close doors behind you when evacuating.
- Stay as far away as possible from windows, glass doors and rooms with large roof spans.
- Kneel and protect your head with your arms.

Active Threat – Shooter On Campus

- **Get Out** – If there is a safe escape route, run to it without running in a straight line.
- **Call Out** – Call 9-1-1 from a place of safety and report to the best of your ability:
  - Your exact location on campus.
  - Number of intruders and direction of travel.
  - Complete physical description.
  - Types and numbers of weapons.
  - Identity of suspects (if known).
  - Victims, descriptions and locations.
- **Hide Out** – Get to an area where you are well hidden and well protected if you can't get out safely.
- **Keep Out** – Lock yourself in a room, turn off all lights, barricade the door with heavy furniture, and silence all noise-producing objects (e.g., cell phones, computers).
- **Spread Out** – Do not huddle in groups. Have a plan of attack in the event the intruder comes into your area.
- **Take Out** – Be prepared to do whatever it takes to neutralize the threat. Throw things. Yell. Use improvised weapons. If there are two or more of you, make a plan to overcome the intruder. Do the best that you can. Choose to survive!

Evacuation Procedures

- Durham Tech's policy is to **EVACUATE** if you hear a fire alarm. The alarm will be activated in the event of a fire or other emergency where staying in the building would be more hazardous than leaving. You may be directed away from a hazardous area.
- Exceptions:
  - Shelter-In-Place (active shooter) – If you are sheltering-in-place and the fire alarm sounds, **DO NOT LEAVE** your secure location unless directed by properly identified emergency personnel or unless staying is more dangerous. The shooter may have activated the fire alarm system.
  - Violent Weather Emergency – Do not exit the building into dangerous weather unless staying is more dangerous. If you have to leave, move to an adjoining building's weather shelter area.

In Case of a Fire

Upon discovering a fire, or seeing smoke, immediately sound the building fire alarm and alert people around you. If there is an odor but no smoke or flame, contact the Durham Tech Police to investigate.

- Alarm stations are located at all exits.
- Evacuation Plan posters, found in all classrooms and hallways, show alarm stations as red dots. ●
- From inside a building: DIAL **911**or **5555** from any Durham Tech extension or red phone. It will ring the Durham Tech Police dispatcher.
- From a cell phone: DIAL **911** to contact the Durham Emergency Communications Center or Orange County 911 Communications.

Provide your name, phone number, building number, address, and the specific location of the fire, if known.

Fire Alarm Sounds - Prepare to Leave

- Turn **OFF** ignition sources in labs like burners and hot-plates. Close doors to adjoining rooms. Close fume-hood sashes. Close any flammable cabinet doors.

- Quickly gather your possessions. Leave heavy or bulky items behind to avoid slowing others.

- If in a group, line up at the door. The first person should know the primary evacuation route. Wait until everyone is ready to leave. The last person out (usually the instructor) should close the door.

- Instructors and Building Safety Captains - assist anyone needing help. Stay calm and focused. Your students and/or colleagues will follow your calm example.

Building Evacuation - Fire

- **Do not use the elevators**.
- Proceed to the nearest exit (your Primary Evacuation Route) in an orderly fashion, closing doors behind you. Take your possessions with you.
- If your Primary Route is unsafe, use your Secondary Evacuation Route. See the Evacuation Posters for this information.
- Go to the designated Assembly Area as a group. Do not leave your group without informing someone in authority.
- Provide emergency personnel with information about people still in the building.
- Never re-enter a building until an “ALL CLEAR” is given by the police department, fire department, or authorized Durham Tech staff.

Evacuation for Individuals with Disabilities - Fire

- **Do not use the elevators**.
- Assist persons needing help to leave the building. Do not try to move their powered chairs.
- Persons on second or third story floors, who cannot descend the stairs safely can gather at locations designated as an “Area of Rescue Assistance” on the College Evacuation Plan posters. Send someone to notify emergency personnel that an individual with a disability needs evacuation.

- Note some exits may be challenging for individuals with a disability. The Fire Evacuation Plan posters designate these challenging exits with a symbol of a person in a wheel chair with a red circle and diagonal slash.

How to Use an Extinguisher: PASS

- **P**: Pull the pin.
- **A**: Aim extinguisher nozzle at the base of the flame.
- **S**: Squeeze trigger while holding the extinguisher upright
- **S**: Sweep the extinguisher from side to side, covering the area with the extinguisher agent.

Durham Tech's policy is to evacuate the area where a fire occurs. Do not attempt to fight a fire unless you have proper training and have help, or it is your only means of escape.

(right click links to open in new window)

Do You Know?

- The location of the nearest fire alarm pull station?
- What emergency phone number to call?
- The location of the nearest fire extinguisher?
- The Primary and Secondary Evacuation Routes and Assembly Areas for your Main Campus location?
- The location of the Severe Weather Shelter Areas for your Main Campus locations?
- The Areas of Rescue Assistance for individuals with disabilities?

In Case of an Active Shooter

Watch this 6-minute video **(right click on link to open in a new window)**

Questions, Comments, and Resources

- Safety Compliance Advisor:
  Jason Davis; davisjg@durhamtech.edu
- Police Chief and Public Safety Director:
  Dawn Tevepaugh, ext. 5504;
  tevepaugha@durhamtech.edu
- Campus Notification Systems: Wynn Center siren, PC-Alert message, Durham Tech Alert email and text, blue-light stations, phone alert (coming soon).
- Durham Tech Emergency Procedures web page
    - Includes videos on what to do in an Active Shooter emergency
- Durham's Notify Me Emergency Notification web page

(right click links to open in a new window)

You have completed the Emergency Procedures Review

You should have:

- ✓Reviewed preparedness **before** an emergency
- ✓Reviewed the emergency phone numbers, where to go in a weather emergency, and how you will be notified of an emergency
- ✓Reviewed the Emergency Evacuation Plan Posters
- ✓Reviewed the Emergency Medical Protocols and Response Checklist Poster
- ✓Watched RUN-HIDE-FIGHT® Active Shooter Video

To Complete This Part of Your Training
Take This 3 Question Test

Use buttons for the test – do not scroll

Use this button if you want to restart the test

Question 1: click the correct response

1. What campus phone number will reach Durham Tech Police in an emergency!

919

5555

910

911

Back

INCORRECT – REVIEW and TRY AGAIN

Review: Durham Tech Police can be reached **on any campus phone:**

From inside of the building: DIAL 911 or 5555 from any Durham Tech extension. It will ring the police dispatcher.

From a cell phone: DIAL 911 to contact the Durham Emergency Communications Center or Orange County 911 Communications.

Question 1: **CORRECT!**

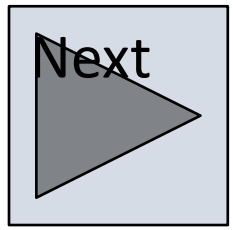
1. What campus phone number will reach Durham Tech Police in an emergency!

From any Durham Tech extension, 5555 or 911 will ring the police dispatcher.

5555

OR

911



Question 2: click the correct response

2. What is the first thing I should do if I discover a fire?

Yell “FIRE!” and press the fire alarm.

Call 911 or 5555 and report the location of the fire.

Locate a fire extinguisher and apply ***P A S S*** to put it out.

Get out of the building immediately.

Back

INCORRECT – REVIEW and TRY AGAIN

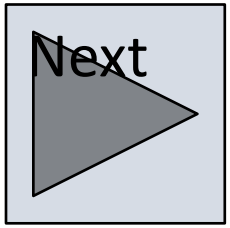
Review: If There Is A Fire What Do I Do?

Upon discovering a fire, immediately alert people around you and sound the building fire alarm.

Question 2: **CORRECT!**

2. What is the first thing I should do if I discover a fire?

Yell “FIRE!” and press the fire alarm.



Question 3: click the correct response

3. What should I do to prepare before an Emergency?

Wait until an emergency to act.

Study the Evacuation Plan and Safety Posters

Know where the Weather Shelter Area is in my building.

There is nothing I can do – others will help.

Back

INCORRECT – REVIEW and TRY AGAIN

Review: Preparedness Before an Emergency

- ✓ Read the Evacuation Plan poster for the building you are in.
- ✓ Be familiar with the Emergency Medical Protocols and Emergency Response Checklist posters.
- ✓ Know the location of the nearest fire alarm pull station, your primary and secondary evacuation routes, your weather shelter area and outside assembly areas.
- ✓ Know what phone numbers to call.

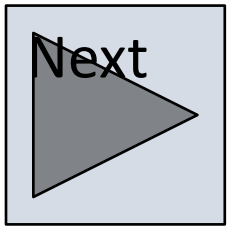
Question 3: **CORRECT!**

3. What should I do to prepare Before an Emergency?

Study the Evacuation Plan and Safety Posters

AND

Know where the Weather Shelter Area is in my building.



TRAINING COMPLETE !

You completed the

Right-To-Know and Fire-Evacuation Training (Student Version)

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