

# Fire Safety Manual



THE UNIVERSITY *of* NORTH TEXAS  
HEALTH SCIENCE CENTER *at* FORT WORTH

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## 1. Introduction

The purpose of this document is to provide all HSC employees, students, and visitors with a safe and healthy working and learning environment, free of hazards. This manual has been prepared by Environmental Health and Safety in an effort to prevent injuries, illnesses, and death from work related causes and to minimize losses of material resources and interruptions from accidental occurrences. It is directed toward the control of all types of hazards encountered in the performance of official duties. The scope of this document is to provide a set of guidelines and best practices that apply to all HSC employees and students that are relevant to the prevention of unintentional fires or injuries related to fires on campus.

The guidance and procedures outlined in this document shall be in accordance with the following:

- NFPA 1: Fire Code – National Fire Protection Association
- NFPA 101: Life Safety Code – National Fire Protection Association
- 29 CFR 1910 – Occupational Safety and Health Standards (General Industry)
- 29 CFR 1926 – Safety and Health Regulations for Construction
- HSC Policies

For questions regarding this document, please contact HSC EH&S at (817) 735-2245.

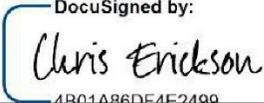
This institutional fire safety manual is adopted under policy 4.201, Campus Operations policy, and must be utilized to protect the campus and personnel from unintentional fires. These documents must be readily accessible to all campus personnel.

## 2. Applicability

This institutional fire safety manual is adopted under policy 4.201, Campus Operations policy, and must be utilized to protect the campus and personnel from unintentional fires. These documents must be readily accessible to all campus personnel.

## 3. Approval and Implementation

This Fire Safety Manual is hereby approved for the University of North Texas Health Science Center. This plan shall apply to all HSC personnel participating in all scientific and medical research activities at HSC facilities or sanctioned activities. The details of this plan are the institutional policies directing fire safety. This plan is effective immediately and supersedes all previous editions.

**Approved:**  **Date:** 04/26/2022

Chris Erickson, MBA, CHMM  
Director, Environmental Health & Safety  
UNT Health Science Center

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## 4. Record of Changes

Change #	Date of Change	Change Entered By	Description

## 5. Contact Information

### 5.1 EH&S Program Contacts

Subject	Office Name	Telephone	Email
Fire and Occupational Safety	Program Manager	817-735-2698	<a href="mailto:William.pingry@unthsc.edu">William.pingry@unthsc.edu</a>
Hazardous Materials/ Chemical Safety Program	Assistant Director	817-735-2691	Alan.corbitt@unthsc.edu
Biosafety Program	Assistant Director	817-735-5431	Maya.nair@unthsc.edu
Safety	Director	817-735-2245	Christopher.erickson@unthsc.edu
Occupational Health	Occupational Health	817-735-2273	

### 5.2 Emergency Phone Numbers

Police/Fire Emergency	Police Dispatch	In-house phone: ext 2600 or 911 Cell phone: 817-735-2600
Emergency Power Outage	Facilities	Ext: 2181 / 817-735-2181
Hazardous Material Release/Spill	Police Dispatch	In-house phone: 2600 Cell phone: 817-735-2600
Hazardous Material Exposure: Skin, Eyes, Ingested, Inhaled, Injected	Occupational Health	EXT. 2273 / 817-735-2273

### 5.3 Other Important Institutional Phone Numbers

Campus Police/Security Non-Emergency	Ext: 2210 / 817-735-2210
Facilities Non-Emergency	Ext: 2181 / 817-735-2181
Environmental Health and Safety	Ext: 2245 / 817-735-2245
Radiation Safety	Ext: 5431 / 817-735-5431

## 5.4 HSC Relevant Website links

Report an Ethics Compliant	<a href="https://secure.ethicspoint.com/domain/media/en/gui/54789/index.html">https://secure.ethicspoint.com/domain/media/en/gui/54789/index.html</a>
First Report of Injury	<a href="https://www.unthsc.edu/administrative/wp-content/uploads/sites/23/WC_Employee_Forms.pdf">https://www.unthsc.edu/administrative/wp-content/uploads/sites/23/WC_Employee_Forms.pdf</a>
Student complaints	<a href="https://unthsc.qualtrics.com/jfe/form/SV_1Mn0IIToxxTH3QF?Q_JFE=qdg">https://unthsc.qualtrics.com/jfe/form/SV_1Mn0IIToxxTH3QF?Q_JFE=qdg</a>

## 6. Introduction

It is the policy of the University of North Texas Health Science Center (HSC) to provide a safe and healthy working and learning environment, free of hazards, for all faculty, students, employees, visitors, and contract employees.

This manual has been prepared by the HSC Environmental Health and Safety Department (EHS) in an effort to prevent injuries, illnesses, and death from work related causes and to minimize losses of material resources and interruptions from accidental occurrences. It is directed toward the control of all types of hazards encountered in the performance of official duties.

### 6.1 Purpose

The purpose of the HSC Fire Safety Manual is to provide employees with general guidelines for implementing a high-quality safety program. The manual brings together information that will assist employees and supervisors to carry out their responsibility in ensuring a safe environment at HSC.

All personnel should become familiar with the information contained in this manual and should conduct their operations accordingly.

### 6.2 Scope

The Fire Safety Manual (or “the manual” as it will be referred to here-in) shall serve as a reference document for ensuring the personal safety of employees, patients, and visitors while working or visiting HSC. The manual shall apply to all property owned or operated by HSC.

This manual contains the objectives, policies, standards, and procedures that pertain to all employees. Specific responsibilities, administrative procedures, and operational requirements are described that are relevant to the prevention of unintentional fires or injuries related to fires on campus.

### 6.3 Development and Revision Process

This manual assembles information that will assist employees and supervisors in carrying out their responsibility of ensuring an environment at HSC that is free of hazards. The manual is not an exhaustive source document but rather a systematic approach to safety. All personnel should familiarize themselves with the information contained within and conduct campus operations accordingly.

The information and requirements provided are applicable to all areas of HSC and represent only general minimum standards; not to be substituted for special operations manuals pertaining to specific locations or situations. This manual will serve as a basis to which supervisors will expand upon as required in their relevant laboratories and work

areas.

All materials in this manual have been developed and maintained under the supervision of EHS. The Fire Safety program has provided guidance for all policy issuances in this manual.

As regulations and guidelines are promulgated by the Texas State Fire Marshal, EHS will make the appropriate changes.

## **7. Fire Safety Program Management**

### **7.1 Goal**

The University of North Texas Health Science Center will provide and promote a safe and healthful working and learning environment and will foster a positive safety and health attitude in managers, supervisors, employees and others (including visitors and contractors).

### **7.2 Policy**

It is the policy of the HSC to develop and maintain a fire safety program. The model program will focus on the protection of the campus against unintentional fires and injuries from fire, and the promotion of safe and healthful actions and attitudes.

### **7.3 Program Elements**

The following program elements are applicable to all university operations and activities. These elements are directed toward the prevention of accidents and health hazards present in the performance of official duties.

### **7.4 Prevention**

EHS will emphasize strategies that preclude or prevent any occurrence that would have an adverse effect on HSC faculty, students, employees, contractors, patients and visitors, and people in the neighboring community.

### **7.5 Surveillance**

EHS will provide for the systematic inspection of facilities; the collection, analysis, interpretation, and evaluation of safety and health data essential to the planning and implementation of the Occupational Safety program.

### **7.6 Protection and Control**

A system for the control of hazards will be maintained and will include, engineering controls, the use of alternatives that are less hazardous, administrative procedures, and the use of personal protective equipment.

### **7.7 Education, Promotion, and Training**

Health and safety awareness will be promoted among managers, supervisors, employees and contractors through orientation programs and regularly scheduled safety education and training sessions, as appropriate.

## **7.8 Notification and Communication**

Employees and others (visitors, contractors) will be notified of their exposure, or potential exposure, to hazardous substances or conditions by EHS and will be informed of risks that result, or may result, from exposure to hazardous substances or conditions.

## **7.9 Confidentiality**

EHS, in conjunction with HSC, will make every effort to ensure the confidentiality of employee health and exposure records.

# **8. Assignment of Program Responsibility**

## **8.1 Director of Safety**

The Director of Safety is responsible for:

- Identifying the applicable standards, guidelines, and recommendations necessary for a safe and healthful work place;
- Establishing and annually reviewing the policies and the procedure manual;
- Requesting program reviews and audits for methods of continuous improvement;
- Developing and managing funding for campus safety improvements and initiatives;
- Developing of metrics for the purpose of trending and problem solving.
- Ensuring adequate emergency response to each incident;

## **8.2 Program Manager, Fire Safety**

The Fire Safety Program Manager is responsible for:

- Ensuring campus compliance with the State Fire Marshal rules and regulations;
- Ensuring inspections and plan review of each project is done in accordance with life safety and fire protection codes.
- Providing training and education;
- Conducting regular surveys of operations to ensure compliance with the fire codes;
- Providing the appropriate level of management when such conditions require corrective actions;
- Reviewing and ensuring the accuracy of life safety and fire protection plans for campus projects;
- Appropriately managing program functions which reduce the potential for unintentional fires or injuries related to fires on campus;
- Ensuring staff takes all necessary and appropriate safety precautions to protect themselves, other personnel, and the environment.
- Facilitating adequate emergency response to campus incidents.

### **8.3 Employees, Managers, and Supervisors**

HSC Staff at all levels throughout the system are responsible for:

- Complying with all safety standards, rules, and regulations issued by HSC;
- Taking all necessary and appropriate safety precautions in order to protect themselves, others, property, and the environment;
- Promptly advising their supervisor regarding all work-related incidents resulting in personal injury, illness, and/or property damage;
- Promptly reporting to their supervisors any unsafe conditions in the workplace; as well as immediate notification of all work-related incidents resulting in personal injury, illness, and/or property damage.

## **9. General Fire Prevention**

### **9.1 Fire Prevention**

- It is the goal of HSC to comply with all of the laws and regulations adopted by the Texas State Fire Marshal. All recognized fire hazards shall be eliminated, or engineering controls put in place to limit the degree of risk posed by the hazards.

### **9.2 Principles of Hazard Control**

#### **9.2.1 Engineering Controls**

##### **Substitution**

The risk associated with hazard may be reduced by replacement of an existing process, material, or equipment with a similar item having more limited hazard potential. Care must be exercised in any substitution to ensure that the substitute materials are technically acceptable and to avoid introducing new or unforeseen hazards.

##### **Isolation**

Hazards are controlled by isolation whenever an appropriate barrier is placed between the hazard and an individual who may be affected by the hazard. This isolation can be in the form of physical barriers, time separation, or distance.

#### **9.2.2 Administrative Controls**

This method of hazard mitigation depends on effective operating practices that reduce the exposure of individuals to chemical or physical hazards. These practices may take the form of limited access to high hazard areas, preventive maintenance programs to reduce the potential for leakage of hazardous substances, or adjusted work schedules, which involve a regimen of work in high hazard and low hazard areas.

### **9.3 Hazard Communication**

Identification and reporting of fire hazards are the responsibility of all HSC employees and an important first step

towards maintaining a fire safe campus. Hazards may be reported in two methods: EHS staff inspections; or employees, guests and visitors.

Fire Safety staff identify hazards as part of daily work on campus or during annual fire prevention inspections conducted in each building or facility. All employees are encouraged to report fire hazards to Fire Safety or to their immediate supervisor who will promptly investigate the situation and take appropriate corrective actions. Employees, guests, and visitors can utilize the email or phone information that is available on the website to report a hazard. A site inspection of any reported hazard will be conducted by EHS.

## **9.4 Application of Fire Prevention Practices**

Fires in the workplace are preventable through appropriate life safety and fire protection plan review, annual building inspection, fire protection system maintenance, and the use of good fire prevention policies.

### **9.4.1 Life Safety and Fire Protection Reviews**

Methods of reducing the potential of an unintentional fire on campus shall be considered and designed or engineered into all facilities. To ensure that appropriate hazard control techniques are applied, EHS shall participate in the review of plans and the development of construction specifications for projects.

### **9.4.2 Annual Building Inspection**

Each building or facility shall undergo a comprehensive life safety and fire protection inspection annually. Deficiencies identified during the inspection shall be submitted to Facilities Maintenance for repair.

### **9.4.3 Fire Protection System Maintenance**

Each building fire protection system shall be maintained in accordance with the applicable fire prevention code developed by the National Fire Protection Association (NFPA) and adopted by the Texas State Fire Marshal. The systems will be inspected and maintained by appropriately licensed vendors, contracted directly by Facilities or EHS. Each system shall be inspected monthly by program staff to ensure the system is working correctly between annual or semi-annual inspection dates.

### **9.4.4 Fire Prevention Practices**

Where possible, the use of engineering practices shall be applied to prevent the ignition of unintentional fires. Where not practical, fire prevention methods established between EHS and the department shall be employed to mitigate the hazards to the extent possible. Education of employees on the importance of the established fire prevention controls is a key factor in employing and maintaining any fire prevention method.

### **9.4.5 Flammable and Combustible Materials**

- A) Substitution - relatively safe materials may substitute flammable liquids sometimes in order to reduce the risk of fires. Any substituted material should be stable and nontoxic and should either be nonflammable or have a high flashpoint.

B) Storage- flammable and combustible liquids require careful handling at all times. The proper storage of flammable liquids within a work area is very important in order to protect personnel from fire and other safety and health hazards.

- Cabinets- Not more than 120 gallons of Class I, Class II, and Class IIIA liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons may be Class I and II liquids. Not more than three such cabinets (120 gallons each) may be located in a single fire area
- Maximum Allowable Capacity of Containers and Portable Tanks (NFPA 45)

Container Type	Flammable Liquids			Combustible Liquids	
	IA	IB	IC	II	IIIA
Glass	500ml	1L	4L	4L	20L
Metal (Other than DOT approved)	4L	20L	20L	20L	20L
Safety Cans	10L	20L	20L	20L	20L
Metal Drums (DOT spec.)	Not Allowed	20L	20L	227L	227L
Polyethylene (DOT Spec. 34, UN 1H1)	4L	20L	20L	227L	227L

Conversion

4L = 1.1 gallons, 20 L = 5 gallons, 227 L = 60 gallons

- Storage Inside Buildings
  - The storage of any flammable or combustible liquid shall not be stored as to limit use of exits stairways, or areas normally used for the safe egress of people.
  - Containers of flammable or combustible liquids must remain tightly sealed, except when transferred, poured or utilized. Remove only that portion of liquid in the storage container required to accomplish a particular job.
  - If a flammable and combustible liquid storage building is used, it will be a one-story building devoted principally to the handling and storing of flammable or combustible liquids.
  - Flammable paints, oils, and varnishes in 1- or 5-gallon containers, used for building maintenance purposes, may be stored temporarily in closed containers outside approved storage cabinets or room if kept at the job site for less than 10 calendar days.

C) Ventilation- flammable and hazardous chemical storage rooms shall be provided with a continuous mechanical exhaust ventilation system. To prevent the accumulation of vapors, the exhaust air openings shall be arranged to provide, as far as practical, air movement directly to the exterior of the building and if ducts are used, they will not be used for any other purpose.

D) Elimination of Ignition Sources - all nonessential ignition sources must be eliminated where flammable liquids are used or stored.

The following is a list of some of the more common potential ignition sources:

- Open flames, such as Cutting and Welding Torches, Furnaces, Matches, and Heaters
  - Electrical Sources of Ignition such as d.c. Motors, Switched, and Circuit Breakers
  - Mechanical Sparks
  - Static sparks
- E) Removal of Incompatibles - materials that can contribute to a flammable liquid fire should not be stored with flammable liquids. Examples are oxidizers and organic peroxides, which, on decomposition, can generate large amounts of oxygen.
- F) Flammable Gases - generally, flammable gases pose the same type of fire hazards as flammable liquids and their vapors; many of the safeguards for flammable liquids also apply and other properties such as toxicity, reactivity, and corrosively must be taken into account. In addition, flammable gas could produce toxic combustion products.

## 9.5 Fire Extinguishers

Portable fire extinguisher is an active fire protection device used to extinguish or control small fires, in emergencies. It is not intended for use on an out-of-control fire, such as one which has reached the ceiling, endangers the user (i.e., no escape route, smoke, explosion hazard, etc.), or otherwise requires the expertise of a fire brigade.

The use of fire extinguisher that matches the class of fire, by a person who is well trained, can save both lives and property. Portable fire extinguishers must be installed in workplaces in accordance with NFPA 72.

### 9.5.1 Classification of Fires and Selection of Extinguishers

#### A) Types of fires

- Class A - Fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics. This would be offices, and labs that do not contain flammables.
- Class B - Fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohol's, and flammables gases. This would include rooms or labs with flammable or combustible liquids.
- Class C Fires that involve electrical equipment where the electrical non-conductivity of the extinguishing media is important. (When electrical equipment is de-energized, fire extinguishers for Class A or Class B fires can be used. Included in this group would be rooms with highly sensitive computer equipment, such as servers.

#### B) Selection and Placement of Extinguishers

The selection of fire extinguishers for a given situation shall be determined by the characteristics of the fires anticipated, the construction and occupancy of the property, and the hazard to be protected. Extinguishers should have a label identifying the type of extinguisher and the type of fires for which it should be used.

- Fire extinguishers should be placed so the travel distance is no more than 75 ft.
- Fire extinguishers shall be kept in their designated places at all times when they are not being used.
- Fire extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of fire. Preferably, they should be located along paths of travel.

- Cabinets housing fire extinguishers shall not be locked.
- Portable fire extinguishers shall be securely installed on the hanger or in the bracket supplied or placed in the cabinets or wall recesses.

### **9.5.2 Inspections**

The Facilities Services personnel will perform a visual inspection on portable fire extinguishers at least once per month to ensure:

- The extinguisher is still present in its designated location
- No damage has occurred to the equipment
- No obstructions are blocking the equipment from view or from easy access
- The extinguisher is fully charged and operational

If needed, inspections that are more frequent will be conducted to meet specific accreditation requirements.

### **9.5.3 Maintenance**

CO2 and pressurized water extinguishers will be hydrostatically tested every 5 years. ABC extinguishers will be hydrostatically tested every 6 years. Each fire extinguisher shall have a tag or label securely attached that indicates the month and year the maintenance was performed and that identifies the person performing the test and state license number.

## **9.6 Fire Safety Inspection & Housekeeping**

EHS conducts routine facility safety inspection, which include observation of building structure, worksite safety, unobstructed access to fire extinguishers and emergency evacuation routes. Please see the Fire Safety manual for more guidance.

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## **9.7 Facilities Design Review**

Facilities will be designed in such a way that is consistent with health and safety regulations and standards of good design. EHS will ensure that there is appropriate health and safety review of facility concepts, designs, and plans. A formal design review process should be in place for all new construction and remodeling efforts.

# **10. Fire Prevention Policies and Permits**

EHS has developed permits to ensure the safety of contractors and pedestrians during renovation and construction projects. Permits are issued by EHS and are consistent with the general industry standards published by OSHA and NIOSH.

## **10.1 Hot Work**

A Hot Work permit shall be issued for any construction or maintenance activities which could produce sparks, flame, heat, or have the capability of initiating fires or explosion. Permits will be issued upon request by facilities personnel during normal working hours; After hours and weekend permits will be provided and approved by EHS. Emergency Hot Work permits will be issued for immediate repairs to critical building infrastructure systems on an as needed basis. All required precautions, including fire watch, listed on the permit must be implemented prior to commencing any Hot Work. The Hot Work Policy is located in Appendix 1.

## **10.2 Holiday Decorations**

This policy outlines the requirements and the permitted decorations during holidays on campus. Decorations should never be hung from fire sprinkler heads, or block fire alarm notification devices or fire extinguishers. No candles or open flames are permitted at any time within the campus buildings, with an exception for laboratories conducting experiments. The Holiday Decoration Policy is located in Appendix 2.

## **10.3 Portable Space Heaters**

This policy prohibits the use of portable space heaters on campus without prior approval from management. The Portable Space Heater Policy is located in Appendix 3.

## **10.4 No Smoking Policy**

HSC has a tobacco-free policy for the campus which was developed by Human Resources. It is the responsibility of each employee to ensure that they comply with this policy, or report violations of this policy to Human Resources. The Policy is available on the HSC website.

## **10.5 Hoverboards**

HSC has banned the use of hoverboards (or electronic skateboards) due to their potential for spontaneous ignition during charging. This is based upon the 2016 U.S. Consumer Product Safety Commission in which 16 fires are linked to originating from the batteries while they were being charged. The hoverboard policy is located in Appendix 4.

## **10.6 Means of Egress**

The means of egress (also known as the exit) in each building shall be maintained at all times to facilitate a safe evacuation of a building or structure during an emergency. Scheduled and impromptu building assessments are conducted by EHS staff to identify hazards which may restrict or prevent evacuation.

The assessments are done in accordance with the 2015 National Fire Protection Association (NFPA) 101: The Life Safety Code and 2015 NFPA 1: The Fire Code.

# **11. Fire Alarms and Building Evacuation**

It is the goal of EHS to reduce the potential of an unintentional fire within a campus building to zero, however; staff are still expected to respond appropriately to an alarm or an evacuation order in a building if necessary. These policies outline employee evacuation procedures for fire alarm activations, severe weather, and notification in the event of other similar type emergency. It is the responsibility of all employees to understand the evacuation procedures for their specific work area.

## **11.1 Campus Buildings**

This policy shall apply to all buildings on campus. It is the responsibility of all employees to understand the evacuation procedures for their specific work area.

In the event of a fire alarm activation within the building, employees and patients in these buildings shall take the necessary steps to evacuate from the building. Staff and patients evacuating shall move to the closest stairway and exit the building. Once outside the building, staff shall report to their predetermined meeting areas with their manager and await additional instructions.

The Campus Building Evacuation Policy is located in Appendix 5.

## **11.2 Off-Campus Buildings**

This policy shall apply to Off-Campus Buildings. It is the responsibility of all employees to understand the evacuation procedures for their specific work area.

In the event of a fire alarm activation within the building, employees and patients in these buildings shall take the necessary steps to evacuate from the building. Staff and patients evacuating shall move to the closest stairway and exit the building. Once outside the building, staff shall report to their predetermined meeting areas with their manager and await additional instructions.

The Off-Campus Building Evacuation Policy is located in Appendix 6.

## **11.3 Fire Drills:**

Fire drills shall be conducted in accordance with the currently adopted edition of NFPA 101: The Life Safety Code.

Employees shall participate in the drill unless they are providing patient care; in which case they should be able verbally explain the location of the closest exit and the procedure to safely evacuate a building. Each department is responsible for developing an evacuation plan based upon the evacuation policies and educating their staff on the procedure, evacuation meeting location, and method of staff accountability.

# **12. Emergency Response**

For campus emergencies related to fire alarms, burning or smoke odors, fire protection system activations, fires; EHS and/or facilities is a first responding organization. University resources such as Facilities Management and HSC Police aid with building function control and traffic and onlooker safety. Additional outside responder organizations, such as the Fort Worth Fire Department, are contacted if the scope of the emergency is beyond the ability of EHS and Facilities.

## **12.1 Operations during Normal Business Hours**

EHS responds to all campus emergencies related to fire Monday – Friday from 7 a.m. to 4 p.m. The department is notified by HSC Police Dispatch and responds the appropriate personnel and resources to investigate and mitigate the hazard. Additional internal and external resources are requested as needed to ensure the safety of the occupants and the continuity of business operations.

## **12.2 After-Hours Operations**

HSC Police Department and Facilities respond to campus emergencies related to fire. EHS staff is available for 24-hour emergency response if necessary and are notified upon request of Facilities Management or the police department shift commander.

## **12.3 Incident Investigation and Documentation**

This process is documented in the section 9 of the Occupational Safety Manual.

## **13. Appendix 1: Hot Work Safety**

### **13.1 Policy Rationale and Text**

This policy is designed to prevent fires caused by construction or maintenance activities such as welding, soldering, and grinding, or any activity which may create a spark or a hazardous condition which could develop into a fire, by ensuring the necessary training and safeguards are in place prior to the work being done.

### **13.2 Scope**

This policy applies to any employee or contractor engaged in installation, renovation, or maintenance activities of any campus building, system, or component which will result in the creation of sparks, flame, or heat. Employees and contractors performing “hot work” operations are required to be suitably trained in the use and safe operation of all required equipment, including safety equipment necessary for the proper protection of the area from an accidental fire.

For the purpose of this policy, authorized employees of the Environmental Health and Safety (EHS) Fire Safety program and Facilities Management shall be considered Permit Authorizing Individuals (PAI).

### **13.3 Procedures for Policy Implementation**

A Hot Work Permit shall be issued for any construction or maintenance activity which could produce sparks, flame, heat, or have the capability of initiating fires or explosions. The permit will be specific to a particular person, location, and job (multiple jobs require multiple permits).

Permit requests must be submitted at least 24 hours before work is started. Permits will be issued during normal HSC working hours. After hours and weekend permits shall be scheduled and approved by Facilities Management. Emergency Hot Works Permits will be issued, in select situations, for immediate repairs to critical building infrastructure systems on an “as needed” basis.

All required precautions listed on the permit, including fire watch, must be implemented prior to initiating any hot work. The PAI representative shall ensure all proper precautions are in place prior to the issuance of a permit. The employee or contractor conducting the work is responsible for making sure that all necessary precautions remain in place for the duration of the work.

Any PAI is authorized to temporarily stop any Hot Work based upon conditions or unacceptable risks that he/she deem violate the requirements set forth in the permit or good safe work practices until such times as those conditions are made satisfactory.

### **13.4 Permit Requirements**

- All required precautions listed on the permit must be implemented prior to commencing any hot work.
- Facilities personnel will review the equipment and outline proper pre-cautions that will need to be in place prior to the hot work.
- The person performing the hot work is responsible for ensuring that these precautions are implemented and remain in place for the duration of the work.
- Hot Work Permit will NOT be issued unless the individual performing the work is on site.

- The person receiving the Hot Work Permit must clearly display the permit for the duration of the work.
- Hot work permits are good for one day only. Once a Hot Work Permit has expired, it may not be used again.

### **13.5 Fire Hazard Assessment**

A fire hazard assessment shall be conducted of the work area prior to starting any work which will produce sparks, or open flame. The assessment shall include the following:

- An evaluation of the work, to determine if it can be moved to an area where there is less of a hazard or a designated “Hot Work” station. If not, appropriate guards shall be implemented to prevent the spread of heat, sparks, and slag and other combustible hazards.
- An evaluation of the area to ensure that the “Hot Work” is not conducted in areas where there is a potentially flammable or explosive atmosphere.
- The area shall be free of all combustible items; items which cannot be moved shall be sufficiently protected by non-flammable material, i.e. grated floors shall be sufficiently covered to prevent falling slag dropping through to lower levels.
- Isolation/shutdown of the HVAC as necessary to prevent the spread of fire.
- Identification and protection of fire suppression devices such as smoke/heat detectors and fire sprinklers.

### **13.6 Personal Protective Equipment**

Proper personal protective equipment (PPE) must be in use while performing hot work. This includes, but is not limited to items such as: welding helmets, gloves, and jackets. If hazards due to inhalation of metal fumes, vapors or dusts exist, appropriate respiratory protection must be used.

### **13.7 Fire Extinguishers**

Extinguishers shall be located where they will be readily accessible and immediately available in the event of fire.

### **13.8 Welding Equipment**

- All welding equipment must comply with the following, as well as all manufacturers’ requirements:
  - Must have operable gauges.
  - Must be secured in a non-combustible container.
  - Must have a shut-off wrench attached and available for use.
  - Hoses cannot have tape applied to them.
  - No quick couplers will be used.
  - No Teflon tape will be used to assist in sealing connection threads
  - Be appropriate for the type of environmental conditions the work is being conducted in.
  - Be properly connected to the electrical/ fuel source without creating additional hazards.
- Arc welders must be properly grounded.
- At a minimum, one (1) 24 oz. (medium duty) 6’ X 6’ fire blanket, that meets NFPA 701, must be on site to

have a Hot Work Permit issued.

### **13.9 Building Fire Protection Systems**

Fire sprinkler heads must be protected when hot work locations are situated within four (4) feet of a sprinkler head. Fire Alarm Devices in the proximity of the work shall be protected from accidental activation using a plastic bag labeled with date, name, and phone number.

### **13.10 Fire Watch Requirements**

Hot Work Permits can be issued if fire suppression systems are not functional or installed. In this case, a fire watch may be required depending on the hazard. When fire suppressions are functional, a 30- minute watch is required on every hot work. However, the time may be adjusted depending on the type of hazard that is involved in the hot work. Hot work roofing activities require a minimum 1-hour fire watch.

### **13.11 Containers**

Welding and cutting on containers shall not occur unless atmospheric testing has been completed and there are no flammable or explosive gases or the interior of the vessel has been purged with an inert gas.

### **13.12 Confined Spaces**

Work in confined spaces shall comply with the HSC Confined Space Policy and this policy:

- All UNT Confined Space Entry Program policies shall apply
- Electrodes shall be removed in the case of long rest periods
- Torches shall be turned off to prevent the accumulation of gases during long rest period
- Hot Work in any confined space automatically makes the confined space Permit Required due to the generation of hazardous atmospheric conditions.

### **13.13 Responsibility**

A Supervisor/Manager shall ensure all heat generating, open flame, and cutting equipment is operated by qualified and properly trained employees.

### **13.14 Employees**

- Acquire the proper equipment for the operation and verify that all equipment is in working condition
- Acquire a fire extinguisher for fire watch personnel and know procedures for reporting emergency situations
  - Fire Emergency: Call HSC Police at 817-735-2600
  - Non-Emergency: Call HSC Police at 817-735-2210
- Verify flammable level using a LEL meter or similar device, where appropriate
- Remove combustibles from work area or protect combustibles that cannot be removed
- Be in possession of a hot work permit prior to start of operation

### **13.15 Fire Watch**

- Watch out for fire hazards in the workplace while work is performed by other employees
- Maintain the conditions and requirements stated on the Hot Work Permit
- Maintain constant means of communication (i.e. visual or voice.)
- Keep flammable materials from ignition sources and stop operations if you find any hazardous condition
- In the event of a small fire, extinguish it immediately. If the fire cannot be extinguished, activate the emergency pull station to alert building occupants
- Do not leave the worksite for an additional 30 minutes, to ensure there are no fire hazards

## 14. Appendix 2: Holiday Decorations

### 14.1 Policy Rationale and Text

To reduce or eliminate the risk of fires by ensuring the safe and responsible use of decorations at HSC.

### 14.2 Scope

This policy applies to any employee or contractor who may use seasonal decorations, fixtures, or similar ornamental objects at HSC.

### 14.3 Procedures for Policy Implementation

The following requirements apply to all seasonal decorations, fixtures, or similar ornamental objects:

- Decorations shall meet, or be arranged in a manner which does not exceed required flame spread and smoke index ratings for the occupancy and building type according to NFPA 101: The Life Safety Code;
- All electrical lighting shall be listed by a Nationally Recognized Testing Laboratory;
- Decorations shall not prevent egress or restrict door closure; nor cause an obstruction to any fixed or portable fire protection equipment such as fire sprinkler heads, fire alarm pull stations, or fire extinguishers;
- The storage of decorations shall be kept a minimum of 18” from the ceiling of a building with an automatic sprinkler system, or 24” in a building without an automatic fire sprinkler system;
- Decorations shall not be hung from any fire sprinkler heads, emergency exit lighting, exit signage, or any fire protection equipment;
- No candles, incense, or any open flames are permitted on campus without prior approval from EHS;
- Natural (live) Christmas trees are not permitted;
- Artificial Christmas trees must be labeled or otherwise identified by the manufacturer as being “flame retreatment” or “flame resistive.”

### 14.4 Definitions

NFPA 101: Life Safety Code: A document produced by the National Fire Protection Association which establishes minimum criteria for the design of egress facilities so as to allow prompt escape of the occupants from the building or, where desirable, into safe areas within buildings.

NFPA 1: Fire Code: A document produced by the National Fire Protection Association which prescribes the minimum requirements necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion, or dangerous conditions.

### 14.5 Related Standards

- 2015 ed. of NFPA 1: The Fire Code
- 2015 ed. of NFPA 101: Life Safety Code

## **15. Appendix 3: Portable Space Heaters**

### **15.1 Policy Rationale and Text**

To eliminate the risk of fire through the safe and responsible use of portable space heaters at HSC.

### **15.2 Scope**

This policy prohibits the use of portable space heaters on campus without prior approval from management. This policy does not apply to general construction work on campus.

### **15.3 Procedures for Policy Implementation**

Once you have been approved to use a portable space heater, the following requirements apply to all portable space heaters in use at HSC:

- Heaters must be listed by Nationally Recognized Testing Laboratory;
- Heaters shall have a safety tip-over switch which automatically turns the unit off if tipped over;
- All heaters must not exceed 1500 watts or have a heating element which exceeds 212 degrees Fahrenheit;
- Heater should not be left on while unattended (for more than 15 minutes);
- Heaters shall be placed 3 feet away from all combustible items;
- Prior to use the electrical cord shall be examined for damage;
- Heaters shall be plugged directly into electrical outlets or cubical power outlets. Extension cords or power strips shall not be used;
- Heaters shall be placed on a level surface and items shall not be stacked on top of the heater;
- In clinical areas, heaters shall only be used in non-sleeping areas and employee office and break areas. Heaters are not permitted to be used in patient treatment areas of clinics, nor in laboratories.

### **15.4 Related Standards**

- 2015 ed. of NFPA 1: The Fire Code

## **16. Appendix 4: Hoverboards**

### **16.1 Policy Rationale and Text**

To eliminate the risk of fire or injury at HSC, the use, possession, or storage of self-balancing, battery powered boards known as hoverboards is not permitted on campus.

### **16.2 Scope**

This policy applies to the use, possession, or storage of a hoverboard on HSC property by any student, patient, guest employee, or visitor.

### **16.3 Procedures for Policy Implementation**

This policy prohibits the use of self-balancing, battery powered boards known as hoverboards and similar based products because of the identified safety hazards associated with the use of product.

In a letter issued by the U.S. Consumer Product Safety Commission (CPSC) on February 18, 2016, the CPSC cites reports of 52 fires across 24 states involved the lithium-ion batteries from December 1, 2015 to February 17, 2016.

This policy does not include the use of motorized equipment associated with the mobility of patients, employees, guests, or visitors in compliance with the American Disability Act (ADA).

### **16.4 Definitions**

Hoverboard: A battery-operated, self-balancing device used for personal transportation. It is also referred to as a self-balancing electric scooter, electric skateboard, or hand-free Segway. The rider or operator stands on a platform with both feet and their body weight to control the movement of the device.

## **17. Appendix 5: Evacuation Procedures for Campus Buildings**

This policy shall apply to all buildings on campus. It is the responsibility of all employees to understand the evacuation procedures for their specific work area.

### **17.1 Fire Alarm Activation Procedure**

In the event of a fire alarm activation within the building, employees and patients in these buildings shall take the necessary steps to evacuate from the building. Staff and patients evacuating shall move to the closest stairway and exit the building. Once outside the building, staff shall report to their predetermined meeting areas with their manager and await additional instructions.

In the event that there is smoke or fire on the floor, employees, patients and visitors shall evacuate the building utilizing the stairwells and assemble at your department's pre-designated assembly point.

### **17.2 Mobility Impaired Persons**

Occupants with mobility impairments shall be directed to the hallway immediately outside of the closest evacuation stairwell\*. A designated staff member with a method of communication shall be assigned to remain with those individuals. A second designated staff member shall descend the stairway and meet up with the responding agency in charge (police, or fire department) and report the number of occupants remaining in the building and their location. Occupants waiting in the hallway shall remain in place unless told to egress the building. In the event that there is smoke or fire in the hallway, the building occupants shall relocate from the hallway to the stairwell and close the door.

Staff members designated to assist in the evacuation shall be pre-determined by the department director/ manager in the department evacuation plan. These individuals shall receive additional training by their manager(s) so that they fully understand their assigned duties.

### **17.3 "All Clear" Notification**

The "All Clear" notification will be provided by EHS, the HSC Police Officers, and Public Safety Officers (PSO) providing site security to all persons who have evacuated the building. Emergency responders will make an announcement utilizing the public address system. Once the "All Clear" notification has been provided, the building can resume normal operations.

### **17.4 Severe Weather or Power Outage**

In the event of severe weather or a power outage, employees, and visitors shall move to an area directly outside of the closest exit stairway and await further instructions from first responders. Additional instructions will be provided via the fire alarm panel public address system or in person from a first responder.

Advanced warning of severe weather will be provided to the best extent possible. Employees should remain attentive to emails, or phone calls via the campus emergency notification system of updated information. It is the employee's responsibility to ensure that their up-to-date contact information is in the HSC Employee Portal.

## **17.5 Department Evacuation Plans and Training**

Each department shall develop their own internal evacuation plan for their personal, visitors, and patients. The HSC Safety website can be utilized as a resource in the development of the plan. Initial training and continuing education on the department evacuation policy shall be provided by department management. It is recommended that the evacuation is exercised semiannually and as part of new employee orientation.

## **17.6 Fire Drills**

Fire drills shall be conducted in accordance with the fire code, or as required by EHS. The drills are designed to simulate a true event and all personnel shall participate. Any problems discovered should be brought to the department manager for review and discussion.

## **17.7 Roles of Internal Agencies**

Environmental Health and Safety (EHS)

Investigate and mitigate the incident as necessary. Act as the liaison with Fort Worth Fire Department or outside health and safety regulatory agencies.

## **17.8 HSC Police (PD)**

Investigate and provide site security. Act as the liaison with outside local and federal law enforcement agencies.

## **17.9 Facilities Management**

Assess and manage critical building systems

## **17.10 Roles of External Agencies**

The Fort Worth Fire and Rescue Department shall be responsible for fire suppression, search and rescue.

\*Note: The stair towers are fire protected enclosures which are considered safe areas in the event of a fire. In the event that the floor becomes untenable, staff and patients can be moved into the stairway where they will be safe until assisted by the fire department.

## **18. Appendix 6: Evacuation Procedures for Off-Campus Buildings**

This policy shall apply to Off-Campus Buildings. It is the responsibility of all employees to understand the evacuation procedures for their specific work area.

### **18.1 Response to Fire Alarms in the Building**

In the event of a fire alarm activation within the building, employees and patients in these buildings shall take the necessary steps to evacuate from the building. Staff and patients evacuating shall move to the closest stairway and exit the building. Once outside the building, staff shall report to their predetermined meeting areas with their manager and await additional instructions.

### **18.2 Mobility Impaired Persons**

Occupants with mobility impairments shall be directed to the hallway immediately outside of the closest evacuation stairwell\*. A designated staff member with a method of communication shall be assigned to remain with those individuals. A second designated staff member shall descend the stairway and meet up with the responding agency in charge (police, or fire department) and report the number of occupants remaining in the building and their location. Occupants waiting in the hallway shall remain in place unless told to egress the building. In the event that there is smoke or fire in the hallway, the building occupants shall relocate from the hallway to the stairwell and close the door.

Staff members designated to assist in the evacuation shall be pre-determined by the department director/ manager in the department evacuation plan. These individuals shall receive additional training by their manager(s) so that they fully understand their assigned duties.

### **18.3 Evacuation**

These buildings are not within the HSC Main Campus and so it is the responsibility of a designated clinic manager or representative to communicate with the responding fire department.

### **18.4 “All Clear” Notification**

The designated responsible person will be required to communicate with the building manager and the fire department to determine when the building can be reoccupied.

### **18.5 Severe Weather or Power Outage**

In the event of severe weather or a power outage, employees, and visitors shall move to an area directly outside of the closest exit stairway and await further instructions from first responders. Advanced warning of severe weather will be provided to the best extent possible. Employees should remain attentive to emails, or phone calls via the campus emergency notification system of updated information. It is the employee’s responsibility to ensure that their up-to-date contact information is in the HSC Employee Portal.

### **18.6 Accountability of Staff and Patients**

Each department shall develop a method of accountability with their employees, visitors, and students in the event of a building evacuation. This method must be used to effectively communicate to emergency responders if necessary.

## **18.7 Department Evacuation Plans and Training**

Each department shall develop their own internal evacuation plan for their personal, visitors, and patients. The HSC Safety website can be utilized as a resource in the development of the plan. Initial training and continuing education on the department evacuation policy shall be provided by department management. It is recommended that the evacuation is exercised semiannually and as part of new employee orientation.

## **18.8 Fire Drills**

Fire drills shall be conducted in accordance with the fire code, or as required by EHS. The drills are designed to simulate a true event and all personnel shall participate. Any problems discovered should be brought to the department manager for review and discussion.

## **18.9 Role of External Agencies**

The local responding fire department shall be responsible for fire suppression and rescue.

\*Note: The stair towers are fire protected enclosures which are considered safe areas in the event of a fire. In the event that the floor becomes untenable, staff and patients can be moved into the stairway where they will be safe until assisted by the fire department.