

SECTION	IV.	Fire/Life Safety
Chapter	1.	Fire Protection
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# FIRE PROTECTION

## INTRODUCTION

### PURPOSE

It is the policy of Duke University to take all possible steps to minimize the potential for fires and to install and maintain equipment necessary to control fires.

### RESPONSIBILITIES

Duke University Facilities Management Department Construction Services, the Medical Center Engineering and Operations Department, and the Office of the University Architect shall ensure that all new installations of fire alarm systems, fire suppression systems, extinguishers and fire alarm equipment to include standpipes, sprinklers, hydrants and fixed extinguishing systems meet all federal, state, and local regulations.

Departments shall:

- Ensure that employees are adequately trained in portable fire extinguisher use and general fire evacuation procedures.
- Report any extinguisher out of place, or one which appears to have been used, to the Occupational & Environmental Safety Office, Fire & Life Safety Division (OESO F&LS) at 919-684-5609.

Employees shall know the location(s) of fire equipment in their specific workplace, be able to utilize such equipment as necessary and be familiar with all exits and evacuation instructions.

OESO F&LS shall:

- Inspect work places on a periodic basis.
- Ensure that adequate fire extinguishers of the correct type and size are available.
- Ensure that extinguishers are inspected according to applicable code.
- Monitor the installation and maintenance of fire equipment and suppression systems.
- Conduct fire drills and extinguisher training.
- Coordinate inspections by the City of Durham Fire Prevention Division and other fire inspection officials.

## **PROCEDURES**

### **FIRE EXTINGUISHERS**

Extinguishers shall be located, labeled, and maintained so that they may be easily identified and in good operating condition.

All fire extinguishers shall be routinely inspected to provide reasonable assurance that they operate properly.

### **EVACUATION AND GENERAL FIRE PROCEDURES FOR HOSPITAL / MEDICAL CENTER**

#### **Medical Gas Shutoff**

To assure that patient safety issues are adequately addressed prior to shutting off medical gases during an emergency situation (e.g., spread of a fire), the following procedure clarifies who is authorized to initiate a medical gas shut off. The procedure outlined below applies when there is a fire at or near the medical gas distribution valves in a patient's room. Note: Medical gases should NOT be shut off during fire drills.

- The primary responsibility for shutting off medical gas(es) in a true emergency/fire situation (when medical gases could contribute to the spread of a fire) rests with the charge nurse, nurse manager, manager, or the designee. On Intensive Care Units, the designated representative must consult with the respiratory therapist, when available, to assure appropriate patient support after the medical gases are shut off.
- The nurse manager (during normal working hours) and the administrative nursing supervisor (during 2<sup>nd</sup> and 3<sup>rd</sup> shifts, holidays, and weekends) will respond to all fire alarms on their assigned units as quickly as possible to support the charge nurse or designated representative's decision and response.
- Respiratory Care Services will respond to all fire alarms on inpatient units as quickly as possible to support the nursing decision and response.
- OESO F&LS personnel will respond to all fire alarms on inpatient units as quickly as possible to support the nursing decision and response.

### **EVACUATION AND GENERAL FIRE PROCEDURES FOR CAMPUS**

Total evacuation is required from all sections of the building. The signal for evacuation is the sounding of the audible devices of the building fire alarm system.

## **FIRE PROCEDURES FOR ALL FACILITIES**

**R -REMOVE ALL PERSONS IN IMMEDIATE DANGER TO SAFETY** to include patients, visitors, students, and employees.

**A -ACTIVATE MANUAL PULL ALARM/DIAL 911.**

Give the following information:

The exact location of the fire (building, location/area, floor, building zone or color, room number) and the name and phone number of person calling.

**C -CLOSE ALL DOORS AND WINDOWS** to prevent the spread of fire and smoke.

**E -EXTINGUISH THE FIRE** with a portable fire extinguisher or **EVACUATE THE AREA. DO NOT USE THE ELEVATOR.**

**NOTE: Employees should review the Departmental Safety Procedures and Site Specific Fire Plan to familiarize themselves with all specific duties and responsibilities assigned to their job description.**

## **FIRE DRILL PROCEDURES**

Fire drills are required by law. They are held, not only to comply with this law, but also to protect patients, visitors, and employees in the buildings. The drills may be conducted at any time. All Duke University buildings are subject to fire drills. See Duke Fire & Life Safety Operating Instruction 1-9, Fire Drill Program for further information.

## **EXITS IN OCCUPIED BUILDINGS**

Doors, aisles, corridors, or passageways leading directly to an exit must be kept clear of all obstructions at all times to include chairs, tables, merchandise, equipment, or similar impediments.

No door, exit corridor, aisle, or passageway leading to an exit or exit sign may be fully or partially covered, blocked, locked, or hidden by any decorations, objects (signs, banners, tables, chairs, etc.), or covering (sheets, banners, drapes, etc.).

Areas directly outside of an entrance or exit must be kept clear of all encumbrances along the entire path to the public way.

## **OPEN FIRES**

No open fire, cooking fire, campfire, or bonfire will be allowed on University property unless the individuals responsible have obtained a review by OESO F&LS. Written consent by OESO F&LS and a permit from the City of Durham Fire Prevention Division may also be required.

North Carolina state law prohibits the use of portable charcoal, gas, or electric grills within ten feet of any combustible materials including siding, decks, furniture, and mulch. Charcoal or electric grills which are not in use and cool to the touch may be stored in approved locations. Propane grills and tanks may neither be used nor stored within ten feet of buildings or combustible materials. Cooking on balconies is prohibited. Where cooking grills are approved, an approved fire extinguisher must be on site and all air handler intakes and building exit discharges must remain clear.

Open fire permits will be issued only on a case by case basis depending on weather conditions, acceptable location, and general compliance as outlined in this policy and local ordinances.

Sky lanterns are prohibited unless tethered (maximum fifteen feet) and constantly attended until extinguished.

## **CANDLES AND OTHER OPEN FLAMES**

It is a violation of university policy to light any material on fire on campus. Candles, other open flame devices, and incense are strictly forbidden for use inside Duke University facilities. Battery or electrically powered candles will be used except when a religious activity specifically requires the use of a live flame. Students and groups will be held financially accountable for any damage they cause as a result of violating this policy and will be referred to the disciplinary process. Additionally, students may be subject to revocation of their Housing License for any violation of this policy. Those individuals

wishing to utilize live flame candles in observance of a religious holiday should contact Religious Life at Duke or Jewish Life at Duke for guidance. OESO Fire & Life Safety (OESO F&LS) will not accept requests directly from students. OESO F&LS will provide information concerning fire prevention directly to Religious Life at Duke and Jewish Life at Duke. Use of candles will not be permitted inside any residential facilities.

Requests for use of live flame candles in outdoor locations need to follow the same process and are subject to approval on a case by case basis.

All personnel should know the location of building fire equipment to include fire extinguishers and manual fire alarm pull stations.

### **ELECTRICAL EQUIPMENT**

All electrical equipment utilized (lights, wires, plugs, connections, sockets, etc.) shall be UL® approved and in good condition. The use of improvised wiring is prohibited.

All combustibles shall be kept at least six inches from any incandescent/fluorescent bulbs, electrical sockets, plugs, or other electrical appliance.

Numerous electrical devices plugged into one outlet through an outlet cube or extension cord may cause a circuit overload or may cause overheating of the electrical appliances, resulting in a fire. Therefore, the use of outlet cubes or extension cords is prohibited. Use a power strip with a built-in circuit breaker.

Appliances (e.g. microwaves, refrigerators, etc.) shall not be plugged into a power strip and shall be plugged directly into a wall outlet. Heat producing appliances such as coffee makers shall never be left unattended.

Portable space heaters are prohibited unless authorized by either the Facilities Management Department, Engineering and Operations, or Housing and Residence Life.

### **DECORATIONS POLICY**

This section of the policy applies to all Duke University facilities to include Campus, Medical Center, Hospital, and Health System. All students, visitors, and employees must adhere to this policy when planning a theme party, event meeting, or decorating any work area. If you have any questions as to whether your decorations fall within the limits allowed by this policy, please contact the OESO F&LS at 919-684-5609 at least three business days prior to the date of the actual event/party or placement of the decorations.

End users are expected to self-evaluate their compliance with this policy. OESO F&LS will not necessarily review every proposal, but ALL CONDITIONS are subject to review by OESO F&LS. Any items not meeting the requirements will have to be immediately removed.

Conditions are also subject to enforcement by the City of Durham Fire Prevention Division and/or changes in requirements due to new codes and standards.

For any requests that do not comply with this policy: End users shall request a review by OESO F&LS prior to installation.

Combustible decorative materials that are suspended from the wall must not exceed 10% of the specific wall to which they are attached.

*Decorative Materials:* Decorative materials include but are not limited to curtains, draperies, fabrics, streamers, bulletin boards, artwork, posters, photographs, paintings, etc.

*Note:* Decorative items shall not extend past the perimeter of the bulletin board or approved wall area.

*Suspended:* Suspended means hanging, taped, tacked or attached in any manner that any portion of the item can be easily lifted away from the wall, creating an air gap.

*Exempt Materials:* Exempt (decorative) materials include wall coverings, ceiling coverings, floor coverings, ordinary window shades, interior finish, and materials 0.025 inch or less in thickness applied directly to and adhering to a substrate.

### **Prohibited Conditions:**

Explosive, highly flammable, combustible fibers, or any other materials which pose an unusually high hazard.

*Combustible Fibers:* Combustible fibers include, but are not limited to readily ignitable and free-burning materials in a fibrous or shredded form, such as cloth, cotton, hay, straw, corn fodder, dried flowers, bamboo, certain synthetic fibers, and similar materials.

Three-dimensional items attached to a wall.

Anything covering or obstructing exits, access to/from, visibility of any fire/life safety fixture or system component (EXIT signs, exit doors, exit access doors, door handles, pull stations, fire extinguishers, strobe lights, etc.) in any manner.

Easels or similar displays (“pop up,” free standing banners).

*Exception:* Easels or similar displays may be permitted if they do not interfere with the means of egress (e.g., outside of the clear width requirement, in an alcove, etc.) and fire protection systems, but they must still meet the general 10% limit.

Decorations cannot be attached to any doors.

*Exception:* For fire rated doors, informational room signage is permitted if it does not exceed 5% of the total surface area of the door (typically 8 ½” x 11”), attached to the door with adhesive only, not with screws or nails.

*Exception:* For non-fire rated doors, informational room signage is permitted if it does not exceed 10% of the total surface area of the door (typically two areas of 8 ½” x 11” each), attached to the door with adhesive only, not with screws or nails.

Items cannot be attached to or suspended from a ceiling.

### **Strategies:**

The amount of non-combustible decorations is not limited or restricted. Many printed materials can be done on glass, metal, etc.

Specially manufactured products that meet Class A interior finish may be available as a substitute for combustible decorations, sometimes at no additional cost depending upon the vendor.

Consider using a common network drive for informational notices instead of a physical bulletin board (e.g., “Electronic Bulletin Board”).

### **Limitations:**

Nothing in this policy is intended to supersede any regulatory requirements of officially recognized codes and standards.

## **HOLIDAY DECORATION POLICY**

### **Trees shall meet all of the following requirements:**

Fire Retardant – verification must be produced on request

Not greater than six and one-half feet AND/OR make certain they don’t come within eighteen inches of the sprinkler heads (even the concealed ones) to include the “tree topper.”

Decorations must be shatter resistant and non-combustible (i.e. no paper, cotton, etc.).

Cannot be placed in an exit path or within ten feet of an exit door.

Garland should be minimal; tinsel strands are not allowed

Live trees and greenery are prohibited

**Lights shall meet all of the following requirements:**

Only UL approved 110-volt or battery operated 9-volt miniature lights may be used. LED lights are preferred.

No more than three strands in a chain.

Areas occupied for regular business hours should have a representative de-energize the lights at the end of the work day.

**Other requirements:**

Doors in patient care areas may not be decorated under any circumstances.

Do not hang anything from the ceiling.

Cotton used to simulate snow should never be used.

Gifts left under trees by kind people should be collected for distribution as allowable, but not left under the trees.

Tree skirts should be minimal and affixed to the bottom of the tree to prevent it from becoming a trip hazard.

Drop cords are not to be used.

Do not tape cords to the floor especially in office areas where chairs can run over them or they are routinely walked across. There are approved “cord minders” that can be used for these circumstances.

Do not place cords under carpet or rugs and do not wind the cord around something.

Rated fire doors may not have decorations placed on them.

All party decorations shall be removed from the area immediately following the event.

*Exception:* During the winter holiday season, decorations shall be removed no later than December 30<sup>th</sup>. Occupants within residential housing facilities shall have all decorations removed no later than the seasonal closing date set by Housing and Residence Life.



## **THEME PARTY POLICY**

Theme party decorations must meet all of the provisions outlined in the Duke University and Duke University Health System Decorations Policy as well as this section.

Fog and smoke machines may not be used inside facilities without written authorization by OESO F&LS.

Animal(s), regardless of size or species, are strictly prohibited to attend or participate in any event, party, or meeting.

Water, waterfalls, pools, spraying water, running water, or utilizing water in any way is strictly prohibited.

Trash must not be allowed to accumulate; collect in appropriate containers and remove as needed and at the close of the event.

## **TRAINING**

All employees are required to attend a fire safety training session upon hire and annually thereafter. The training covers fire prevention, procedures to follow in a fire, evacuation, and extinguisher familiarization.

## **REFERENCES:**

Code of Federal Regulations, Title 29, Part 1910, Subpart L (OSHA), *Fire Protection*

North Carolina State Building Code: *Fire Code*

National Fire Protection Association (NFPA) Standards