FIRE PREVENTION

TABLE OF CONTENTS

1. EMERGENCY PROCEDURES

A. If you discover a fire,

1. Activate the fire alarm.
2. Follow the Fire Emergency Response Guideline.

2. FIRE PREVENTION PLAN

A. Scope

1. The purpose of the Fire Prevention Plan is to eliminate the causes of fire and prevent loss of life and property by fire. It provides faculty, staff, and students with information and guidelines, which will assist them in recognizing, reporting, and controlling fire hazards.

3. POTENTIAL FIRE HAZARDS

Fires, like all other types of accidents, are largely preventable.

A. Common Causes of Fires

- Overloaded electrical circuits, unsafe wiring and defective extension cords.
- Appliances such as coffee pots, hot plates and other heating devices left on when not in use.
- Unattended cooking.
- Overheated motors and other equipment not maintained properly.
- Improper use of welding torches and equipment.
- Poor housekeeping, which results in accumulation of combustibles such as paper, boxes, oil-soaked cloths, and flammable liquids.
- Disposal of cigarettes in undesignated areas.

4. HOUSEKEEPING

A. Good housekeeping practices can prevent fires, prevent the spread of fire in case of ignition, and prevent injury during evacuation. The following prescribes several basic housekeeping requirements.

1. Sufficient waste receptacles are to be provided and emptied on a daily basis.
2. Oily rags are to be kept in a covered metal container.
3. Litter is to be removed from hallways, stairways and floors on a daily basis.
4. Accumulation of paper and flammables are to be kept to a minimum.

5. Combustible materials are to be stored away from heating devices.

6. Attic storage of combustible materials is prohibited.

7. Current and frequent removal of finely divided material by use of broom or vacuum.

5. MAINTENANCE OF EXITWAYS

A. General

1. All halls and exits shall be maintained according to the OSHA regulations, recommendations of NFPA Life Safety Code and the American Insurance Association. The State Department of Insurance may require additional rules as a condition for providing insurance.

B. Obstructions to Means of Egress

1. No obstructions of any kind shall be placed in front of or upon any fire escape, balcony or other exit intended as a means of escape from a fire.

2. No aisle, exit access, or stairway in any place of occupancy shall be obstructed with tables, showcases, filing cabinets, coat racks, or other obstructions so as to reduce its required width as an exit way during the hours the facility is open to the employees and public.

3. All exit doors shall be unlocked when the building or a portion of the building, served by the exit, is occupied.

B. Hallways

1. Storage of any kind or use of office or laboratory equipment in hallways is not permitted.

2. Permanently attached lockers, bulletin boards, display cabinets, etc. may be permitted in some locations, subject to approval of the Campus Safety and Police Office. Transparent covers on bulletin boards and display cabinets must be safety glass or non-splintering material.

C. Stairwells and Landings

1. Storage of materials on stairs, landings, or under stairs is strictly forbidden.

D. Doors

1. Fire doors separating stairwells from hallways or smoke partition doors are to be equipped with self-closing mechanisms or automatic release hold-open devices and must be maintained in working order. They are never to be blocked, wedged or tied open.

E. Lighting of Exit Ways

1. Stairways, hallways, and other exit ways including the exterior open spaces to or through which exit ways lead shall be kept adequately lighted at all times when the building served thereby is occupied.

2. Adequate lighting shall provide not less than 1.0-foot candle on waling surfaces.

F. Railings, Steps, and Walks

1. The area immediately outside of building exits shall be maintained free of material at all times.

G. Bicycles

1. Bicycles and gasoline-operated vehicles are not permitted in hallways, stairwells, or on sidewalks immediately adjacent to exits.

6. SAFETY PROCEDURES FOR PUBLIC ASSEMBLIES

A. General

1. This procedure is to apply to all buildings or portions of building used for gatherings of 75 or more persons for such activities as entertainment, dining, amusement, lectures, seminars, etc. Described minimum criteria are for emergency planning and fire prevention practices to be employed by departments responsible for such gathering places.

B. Emergency Planning

1. The employees or attendants at places of assembly should be trained in the duties they are to perform in case of fire, panic, or other emergency, to be of greatest service in effecting orderly exit of assemblages.

2. Attendants should know how to use fire extinguishers.

3. The wording of an emergency evacuation announcement should be established prior to the event and a specific person should be designated to make the announcement.

4. It is preferable that the fire alarms in the assembly area not be suddenly sounded as this may cause panic.

NOTE: In many college buildings the fire alarms may automatically activate. In this situation, consideration should be given to making an announcement concerning this possibility before the event.

C. Open Flame Devices

1. No open flame devices are to be used for ceremonies, theatrical performances, and the like, without prior approval of Campus Safety and Police.

D. Special Food Service Device

1. Portable cooking devices not flue-connected are to be used with prior approval from Campus Safety and Police.

2. Candles may be used on tables for food services if securely supported on substantial noncombustible bases located in such a way as to avoid a danger of ignition of combustible materials. Candle flames must be protected.

E. Smoking

1. Smoking in places of assembly is not permitted. Signs to this effect should be mounted in conspicuous locations.

F. Flammable Liquids

1. The storage of use of flammable liquids in assembly areas is prohibited.

G. Decorations and Stage Scenery

1. Combustible materials must be treated with an effective flame retardant material. Stage settings made of combustible materials must likewise be treated with flame retardant materials as indicated below:

    - Plywood, wood, particle board, mineral and fiber board, hardwood, etc. must be flame retardant treated or otherwise be UL listed with flame spread of 75 or less (class B).

    - Fabrics such as draperies and curtains must be flame retardant treated or non-combustible.

    - Plastics must be UL labeled with flame spread of 75 or less and must not exceed 10% of the wall or ceiling area. Pyroxylin plastics are prohibited.

    - Cardboard should be flame retardant treated or painted with fire retardant paint and must not exceed 10% of the wall or ceiling area.

    - Carpet must meet Federal Flammability Standard FF-1-70.

H. Seating

2. Non-fixed seating arrangements for gatherings of 75 or more persons require prior approval by Campus Safety and Police. Any increase of the seating capacity of assembly rooms with fixed seats requires approval from the Campus Safety and Police.

7. FLAMMABLE AND COMBUSTIBLE LIQUIDS

The College is to follow the recommendations contained in the NFPA codes as minimum requirements for acceptable storage and use practices of flammable and combustible liquids. These requirements have been incorporated into the OSHA standards (29 CFR

Part 1910), the North Carolina Building Codes, or are required as a condition of insurance coverage by the Department of Insurance.

This section does not incorporate all of the applicable standards, but those cited most frequently during inspections by the Department of Labor- Occupational Safety and Health Division and the Department of Insurance.

A. Definitions

1. Shop or laboratory unit is defined as a room, or suit of rooms, separated from adjacent areas by walls and doors having at least a one-hour fire rating.

2. Flammable liquids are any liquid having a flashpoint below 100 degrees F. (37.8 degrees C.) Flammable liquids are also known as Class I liquids and subdivided according to flashpoint and boiling point as indicated in Table I under Classes.

B. Classes

Table I

Flammables			Combustibles	
IA	IB	IC	II	III
Flashpoint <73°F	<73°F	<73°F=100°F	100°F	140°F 140°F

C. Requirements

1. The potential fire hazard also depends on the flammability and the quantity of liquid being used. The following tables gives the maximum size container allowed for each class of liquid.

Table II

Container Type	Class				
	IA	IB	IC	II	III
Glass or Plastic	.12	.25 gal.	1 gal.	1 gal.	1 gal.
Metal	1 gal.	5 gal.	5 gal.	5 gal.	5 gal.
Safety Can	2 gal.	5 gal.	5 gal.	5 gal.	5 gal.

2. The potential fire hazard also depends on the total quantity of flammable and combustible liquids present within a containment unit and the type of containers in which the liquids are stored. The maximum quantity allowed per unit is as follows:

a. Shelf or open storage/use

1. Glass, plastic or cans 10 gallons
2. Safety cans 25 gallons

b. Approved storage cabinets (maximum of two per lab unit)

1. Class I and II 60 gallons
2. Class III 120 gallons

c. Inside storage room (meeting NFPA Code recommendations)

1. with sprinkler 2-10 gal./sq. ft.
2. without sprinkler 2-4 gal./sq. ft.

3. It should be emphasized that the quantity of flammables on hand in a unit must be kept to a minimum and only in unusual circumstances will be the maximum quantities are permitted. The following guidelines are adopted by the College on the recommendation of the Deputy Commissioner of Insurance:

   a. If a one-gallon quantity of one specific liquid represents more than a thirty-day supply of a class IA or I flammable, smaller quantities should be used.

   b. Multiple cans and/or bottles or any one specific flammable will not be permitted in a unit in open storage or storage cabinet if it represents more than five-day supply of that flammable.

   c. Quantities stored in inside storage rooms are not to exceed a thirty-day supply for the building.

D. Safety

1. Safety cans are required for the storage and transportation of gasoline on College property. Safety cans are required if the total quantity of a specific liquid is 5 gallons or more.

E. Storage Cabinets

1. Cabinets constructed according to NFPA standards are to be used when quantity limits cannot be met otherwise. Storage cabinets must be locked when unattended and are not permitted in hallways.

Table of Contents

F. Inside Storage Rooms

1. Where possible, establishing central storage room is preferable to providing storage cabinets in each unit. This alternative is to be considered by agencies, which have centralized supply rooms that can easily be converted to the NFPA standards.

G. Refrigerators

1. Flammable liquids are not to be stored in domestic type refrigerators. "Safety" refrigerators are to be used. "Safety" refrigerators have the electrical contacts (door switch, light, thermostat, etc. removed or exteriorized). "Explosion Proof" refrigerators are recommended for inside storage room (for flammables) or other potentially explosive atmospheres.

H. Warning Signs

1. Open flames are not permitted where flammable liquids are being used. The unit or area must be posted "NO SMOKING" and containers are to be labeled "DANGER – FLAMMABLE- KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLMES, KEEP CONTAINER CLOSED WHEN NOT IN USE".

I. Evacuation Procedure

1. A written evacuation procedure is written in the Emergency Action Plan for each building in case of an emergency. All occupants of the building will be appropriately trained in the purpose and function of the plan and fire exits drills will be exercised as needed (at least annually) to assure safe egress by all occupants in case of an emergency.

2. Following building evacuation, employees are to assemble at their designated evacuation area and must be accounted for.

J. Reporting Fires

1. The first concern by anyone discovering a fire must be for the safety of the people exposed by the fire. Therefore, all of the occupants of the building or facility will be immediately warned of the danger and required to evacuate the facility. The fire will be reported by the fasted means to the local fire department. After the fire department has been notified, Campus Safety and Police is to be notified so the they can assist in safe handling of the emergency. Open flames are not permitted where flammable liquids are being used. The unit or area must be posted "NO SMOKING" and containers are to be labeled "DANGER – FLAMMABLE- KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLMES, KEEP CONTAINER CLOSED WHEN NOT IN USE".

Table of Contents

8. PORTABLE FIRE EXTINGUISHERS

A. General

1. The provision of this requirement apply to the selection, distribution, inspection, maintenance and testing of portable extinguishing equipment. The requirements given herein are minimums. Portable extinguishers are intended as a first line of defense to cope with fires of limited size. They are needed even when a facility is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment.

B. Definitions

1. The basic types of fires are Classes A, B, C, and D as defined in the following:

    a. Class A fires are fires in ordinary combustible materials, such as wood, paper, rubber, and may plastics.

    b. Class B fires are in flammable liquids.

    c. Class C fires are fires which involve energized electrical equipment where the electrical nonconductive of the extinguishing media is of importance. (When electrical equipment is de-energized, extinguishers for Class A or B fires may be used safely).

    d. Class D fires in combustible metals, such as magnesium titanium, zirconium, sodium, and potassium.

C. Classification and Ratings of Fire Extinguishers

1. Portable fire extinguishers are classified for use on certain types of fires and rated by nationally recognized testing laboratories for relative extinguishing effectiveness at a temperature of 70°F. The classification and rating are based upon the preceding classification of fires and the fire-extinguishment potentials as determined by fire tests.

D. Selection of Fire Extinguishers

1. The character of the fires anticipated determines the selection of extinguishers for a given situation.

    a. Required building protection shall be provided by fire extinguishers suitable for such Class A, B, C or D fire potentials a may be present.

    b. Protection against occupancy hazard shall be provided by fire extinguishers suitable for such Class A, B, C or D fire potential as may be present.

Table of Contents

E. Mounting Locations

1. Extinguishers shall be conspicuously located where they will be readily accessible in the event of fire. They shall be located along normal paths of travel, including exits from an area.

F. Maintenance

1. Extinguishers are to be recharged after use of pressure leakage. Extinguishers are to be visually inspected monthly by personnel either occupying the facility or contracted. Inspections shall be verified by Campus Safety and Police.

G. Extinguisher Loss Due to Damage or Theft

1. It is the responsibility of the using department to institute security measures to prevent losses due to theft.

H. Training

1. The Campus Safety and Police will arrange for and conduct demonstrations and training sessions on the proper use of portable fire extinguishers.

I. Night Shift Responsibility

1. During non-working (nights, holidays, weekends, etc.), no one alone in the building shall attempt to contain or extinguish any fire. Upon arrival at the College, the local fire department must be directed to the nearest entrance into the College where the fire is located. He/she must also notify Campus Safety and Police.

J. Fire Alarm System

1. Automatic fire alarm systems installed in the College facilities are to be inspected on an annual basis. Maintenance of the system is under the supervision of the Facilities Department and Maintenance.

2. No person, other than fire department personnel or Campus Safety and Police is authorized to adjust, reset, or otherwise manipulate automatic alarm systems unless so designated, unless so designated by Campus Safety and Police.

K. Fire Extinguishing Installations

1. Maintenance and inspection of automatic sprinkler systems, standpipes, hose installations and other fixed extinguishing systems is the responsibility of the Maintenance Department.

Table of Contents