FIRE PREVENTION PLAN

Reynolds Community College
Safety Division
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J. Sargeant Reynolds Community College

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Reynolds Community College
FIRE PREVENTION PLAN

Purpose

The Fire Prevention Plan is a written document developed, approved and implemented by Reynolds Community College to mitigate the risk to faculty, staff and students of the college. The primary goal of this plan is to reduce or eliminate fire related hazards in the workplace by heightening the fire safety awareness of all employees. Also, the plan provides employees with the information necessary to recognize hazardous conditions and take appropriate action before such conditions result in a fire emergency. The OSHA Fire Prevention Standards establish uniform regulations to ensure workplace fire hazards are evaluated, safety procedures implemented, and that the proper fire prevention information is transmitted to all affected workers.

This plan coincides with the currently approved and established Emergency Operations Plan (EOP), which may be reviewed in its entirety on the Reynolds Community College Department of Police website.

Written Program

Reynolds Community College's Safety Manager will review and evaluate this plan on an annual basis, when changes occur to the standard, or when facility operational changes occur that require revision. Effective implementation of this plan requires support from all employees. This written plan will be made available to all new employees and posted on the Department of Police website.

Definitions

***Emergency**:* Any unplanned event that can cause death or injury to employees, students, or the public or that can shut down business, disrupt operations, or cause physical or environmental damage.
***Evacuation Route**:* The shortest path from an effected area to an area of safety, a shelter area, or a location out of the building.
Area of Rescue: Designated stairwell(s) used as a temporary staging area for disabled/handicapped individuals during egress.

Emergency Procedures

As outlined in the college's Emergency Operations Plan, The Emergency Coordinator (Chief of Police) or designee will be responsible for coordinating all emergency response actions at the college at the onset of a fire related emergency. Evacuation procedures for faculty, staff and students shall be followed as set forth in the Emergency Operations Plan. The following information is given as general fire emergency or building evacuation procedures, however, please

refer to the Emergency Operations Plan for detailed procedures and additional emergency related information.

Fire Emergency or Building Evacuation

1. Sound the local alarm (i.e., activate fire alarm via pull station, contact the Department of Police)
2. Immediately exit the facility via the closest unobstructed exit route.
3. Assist disabled/handicapped individuals to a designed Area of Rescue stairwell and notify emergency personnel of their location.
4. Remain at a point at least 300 feet from the facility.
5. Account for people under your responsibility.
6. Remain outside facility until ALL CLEAR message is announced.
7. When it has been determined that the treat is over and it is safe to return to normal operations, the Emergency Coordinator, or designee shall broadcast an “ALL CLEAR”.

Reporting an Emergency

To ensure the safety of all college employees and facilities, all emergencies must be reported immediately.

To report an emergency, call the college’s Police Communication Center by dialing
-5911 from any college IP phone system.

*****Use of an analog or cell phone, the entire number must be dialed****
523-5911

Provide the following information to the communications dispatcher officer:

- Your name and telephone number.
- Exact location of the fire incident (campus building and room number, if applicable).
- Description of source or extent of the fire.
- Any other relevant information.
- Do not hang up the telephone until the dispatcher has indicated that you have provided all the necessary information.

Special Arrangement Procedures for Cooking In the Culinary Arts Program

Culinary Arts is responsible for the cleaning and maintenance of heat producing equipment such as burners, heat exchangers, boilers, ovens, stoves, and fryers and ensure the storage of flammables are away from this equipment.

Due to the nature of certain program activities and student learning experiences, at times it may be necessary for food materials (stock) to cook after the closing of the DTC facility (overnight). It is noted that this activity should be as limited as much as possible and all pertinent safety and notification processes must be followed. In an effort to minimize the risk of incident, the following measures are given.

- Cooking shall to be limited to the electric steam-jacketed kettle and the Rational Clima plus Combi convection oven in DTC 674. Should the electric steam-jacketed kettle or convection oven not be available or inoperable, no substitute method of unattended cooking shall be utilized.
- The hood ventilation system and the fire suppression system associated with the hood shall be inspected by the Facilities Department on an annual basis.
- Should the hood and/or the fire suppression system be inoperable, overnight cooking shall be discontinued until repairs are complete and tested.
- All personnel in the Department of Police will be trained in the proper shut-off procedures of the equipment.

College Welding Instruction

- Standard Operating Procedures will be posted in the shop on how to use welding equipment safely, and require all students to follow the written procedures
- The instructor will dedicate time in the first lecture in every class on safety
- All first time students are required to take the America Welding Society (AWS) safety test before lab use
- No flammables are allowed in the cutting or welding areas
- Students are required to have proper P.P.E. or they cannot participate in lab activities
- Fire extinguishers are located in each welding area and inspected monthly

Responsibilities

All employees are responsible for reporting potential fire hazards to supervisors and the Safety Manager immediately. Employees are encouraged to routinely inspect work area for potential fire hazards. Employees may use the attached inspection sheet (Addendum B)

The Safety Manager will conduct quarterly audits providing appropriate feedback to managers.

Workplace Fire Hazards/ Prevention Techniques

- Keep storage, working areas and offices free of trash and clutter.
- Keep oily rags in a covered metal container and dispose of properly.
- Don't overload electrical outlets.
- Ensure that all passageways and exits remain unobstructed.
- All exit doors shall remain unlocked when the building or a portion of the building served by the exit is occupied.
- Stairwell doors shall never be propped open and materials shall not be stored in stairwells or on landings.
- Remove accumulations of combustible dust.
- Store flammable and combustible liquids in approved storage containers and cabinets.
- Maintain free and clear access to electrical panels. Do not stack or store materials within 3 feet of the electrical panel.
- Do not store combustible materials of any kind in mechanical rooms.
- Conduct regular maintenance of all mechanical equipment.
- Maintain free and clear access to fire extinguishers and fire alarm pull stations.
- Follow proper storage and handling procedures as directed by the product manufacturer.
- Check equipment wiring for frayed or damaged wires and replace immediately.
- Smoking is permitted in designated areas only. Use proper receptacles to discard butts.
- Do not refuel gasoline-powered equipment while it is hot.
- Candles/incense/open flames are not permitted in any setting except for supervised classroom and/or lab functions.
- Candle warmers are not permitted.
- Small electrical items/coffee makers shall not be placed on combustible surfaces (plastic or cloth mats, wood countertops).
- Ensure that coffee pots are not left on or unattended for long periods of time.
- Extension cords should only be used for temporary connections.
- Keep storage 18 inches away from sprinkler heads and 24 inches from the ceiling in non-sprinkler areas.

- Maintain free and ample space around any heat source.
- The use of space heaters is prohibited. Please contact the college's Facilities Department regarding temperature issues in your work area.

Fire Detection, Alarm and Suppression Equipment

The Director of Facilities Management will be responsible for maintaining equipment to prevent or control sources of ignition or fires as well as the proper mandated testing thereof. Documentation of the testing will be forwarded to the Safety Office.

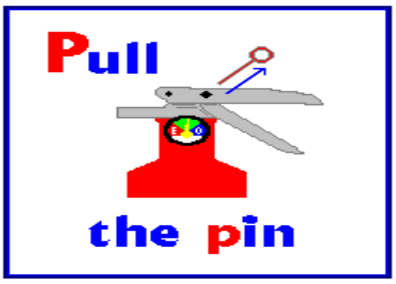
For a list of the college's fire suppression equipment by individual location, please refer to Addendum A.

All fire extinguisher purchases or replacement and annual contracted inspection will be the responsibility of the Facilities Management and Planning department. A copy of the annual inspections certification will be forwarded to the Safety Office. Documented monthly inspections will be conducted by the Department of Police and maintained in the department on the respective campus. The Safety Office will conduct random inspections of fire extinguishers. The exact location of all fire extinguishers at each facility will be maintained in the Department of Police on the respective campus. The Safety Office and Facilities Management and Planning department will maintain a master copy of all fire extinguisher locations throughout the college.

Designated Department of Police and Facilities staff will be trained in the proper use of fire extinguishers. Additional identified college staff will be trained as necessary. This training will be conducted periodically as needed. Training records will be maintained in the Safety Office.

How to Use a Fire Extinguisher

It is easy to remember how to use a fire extinguisher if you remember the acronym, "PASS."

Pull **A**im **S**queeze **S**weep	
Pull the pin **This will allow you to discharge the extinguisher.**	
Aim at the base of the fire **Hit the fuel…if you aim at the flames, the extinguishing agent will pass right through and do no good.**	
Squeeze the top handle **This depresses a button that releases the pressurized extinguishing agent.**	
Sweep from side-to-side until the fire is completely out. **Start using the extinguisher from a safe distance away and then slowly move forward. Once the fire is out, keep an eye on the area in case it re-ignites.**	

Rules for Fighting Fires

Fires can be very dangerous and you should always be certain that you will not endanger yourself or others when attempting to put out a fire. For this reason, when a fire is discovered,

1. Assist any person in immediate danger to safety, if it can be accomplished without risk to you.

2. Call 5911 or activate the building fire alarm. The fire alarm will notify the fire department as well as other building occupants and shut off the air handling system to prevent the spread of smoke.

If the fire is small (and only after having done these two things), you may attempt to use an extinguisher to put it out.

However, before deciding to fight the fire, keep these things in mind:

- **Know what is burning**. If you don't know what is burning, you won't know what kind of extinguisher to use.

- Even if you have an ABC fire extinguisher, there might be something in the fire that is going to explode or produce toxic fumes.

    - Chances are you will know what is burning, or at least have a pretty good idea, but if you don't, let the fire department handle it.

- Is the fire spreading rapidly beyond the point where it started? The time to use an extinguisher is at the beginning stages of the fire.

- If the fire is already spreading quickly, it is best to simply evacuate the building.

- As you evacuate a building, close doors and windows behind you as you leave. This will help to slow the spread of smoke and fire.

Do not fight the fire if:

<u>You don't have adequate or appropriate equipment.</u>
If you don't have the correct type or large enough extinguisher, it is best not to try fighting the fire.

<u>You might inhale toxic smoke.</u>
When synthetic materials such as the nylon in carpeting or foam padding in a sofa burn, they can produce hydrogen cyanide, acrolein, and ammonia in addition to carbon monoxide. These gases can be fatal in very small amounts.

Your instincts tell you not to.

If you are uncomfortable with the situation for any reason, just let the fire department do their job.

The final rule is to always position yourself with an exit or means of escape at your back before you attempt to use an extinguisher to put out a fire.

In case the extinguisher malfunctions, or something unexpected happens, you need to be able to get out quickly. You don't want to become trapped.

Addendum A: Fire Suppression Equipment

Parham Road Campus

Sprinkler Systems

1 Each – Fire Pump/Flow Test
4 Each – Wet Pipe Sprinkler System
4 Each – Standpipe & Hose (Wet)

Fire Alarm Systems

1 Each – Simplex 4100 Programmable Fire Alarm Control Panel
1 Each – Notifier Afp-1010 Addressable Fire Alarm Control Panel
1 Each – MS-9200UDLS Addressable Fire Alarm Control Panel
1 Each – GE EST Programmable Fire Control Panel
52 Each – Pull Stations
28 Each – Heat Detectors
126 Each – Smoke Detectors
34 Each – Duct Smoke Detectors
239 Each – Horn/Strobe Devices
1 Each – Battery Back-Up Power Supply

Fire Extinguishers

103 Each – Multiple Size/Type Hand Held

Downtown Campus

Sprinkler System

1 Each – Fire Pump/Flow Test
1 Each – Wet Pipe Sprinkler System(S)
1 Each – Deluge/Preaction Sprinkler System
5 Each – Backflow Prevention Device(S)
2 Each – Standpipe & Hose (Wet)
7 Each – Kitchen Hood System Co2

Fire Alarm System

1 Each – Simplex 4100/4020 Programmable Fire Alarm Control Panel
46 Each – Pull Stations
13 Each – Heat Detectors
94 Each – Smoke Detectors
15 Each – Duct Smoke Detectors
193 Each – Horn/Strobe Devices
101 Each – Visual Strobe Devices
1 Each – Battery Back-Up Power Supply
4 Each - Stairway Smoke Control Systems

Fire Extinguishers

76 Each – Multiple Size/Type Hand Held

Downtown Campus – Parking Deck

Fire Alarm System

1 Each – Vigilant VS series Control Panel
9 Each – Heat Detectors
14 Each – Smoke Detectors

Fire Extinguishers

16 Each – Multiple Size/Type Hand Held

Goochland Campus

Sprinkler Systems

2 Each – Wet Pipe Sprinkler System(S)
1 Each – Preaction Sprinkler System
5 Each – Backflow Prevention Device(S)
1 Each –Lab Hood System Co2

Fire Alarm System Equipment

1 Each – Fci Fc7200a Addressable Control Panel
1 Each – GE EST Programmable Fire Control Panel
22 Each – Pull Stations
2 Each – Heat Detectors
13 Each – Smoke Detectors
3 Each – Duct Smoke Detectors
56 Each – Horn/Strobe Devices
18 Each – Visual Strobe Devices

Area of Rescue Assistance Communication System

1 Each – Cornell Master Station
1 Each – Audio-Visual Call Station
1 Each – Battery Back-Up Power Supply

Fire Extinguishers

46 Each – Multiple Size/Type Hand Held

1 Each – Audio-Visual Call Station
1 Each – Battery Back-Up Power Supply

Fire Extinguishers

46 Each – Multiple Size/Type Hand Held

Addendum B: **Fire Inspection Checklist**

Initials: _____

Date: _____

General Work Environment	Yes	No	N/A	Comments
Is your local fire department well acquainted with your facilities, its location, and specific hazards?				
If you have a fire alarm system, is it certified as required?				
If you have a fire alarm system, is it inspected annually?				
Are fire doors and shutters in good operating condition?				
Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?				
Are fire doors and shutter fusible links in place?				
Are sprinkler heads protected by metal guards, when exposed to physical damage?				
Is an 18” clearance maintained below sprinkler heads?				
Are fire extinguishers mounted in readily accessible locations?				
Are fire extinguishers recharged regularly and noted on the inspection tags?				
Are fire extinguishers checked monthly when flammables or chemical are present?				
Are fire extinguisher locations identified by signage?				

Are all worksites clean and orderly?				
Is combustible scrap, debris, and waste stored safely and removed from the worksite promptly?				
Are accumulations of combustible dust routinely removed from elevated surfaces, including the overhead structure of buildings, etc.?				
Is combustible dust cleaned up with a vacuum system to prevent the dust going into suspension?				
Are covered metal waste cans use for oily and paint-soaked waste?				
Are paint spray booths, dip tanks, etc., cleaned regularly?				
Are fire watcher assigned when welding or cutting is performed in locations where a serious fire might develop?				
Before hot work is begun, are used drums, barrels, and other containers thoroughly cleaned so that no substances remain that could explode, ignite, or produce toxic vapors?				
Walkways	**Yes**	**No**	**N/A**	**Comments**
Are aisles and passages kept clear?				
Are changes of direction or elevations readily identifiable?				
Exits or Egress	**Yes**	**No**	**N/A**	**Comments**
Are all exits marked with an exit sign and illuminated by a reliable light source?				
Are the directions to exits, when not immediately apparent, marked with visible signs?				

Are doors, passageways or stairways, that are neither exits nor access to exits and which could be mistaken for exits, appropriately marked “Not an Exit,” “To Basement,” “To Storeroom,” etc.?				
Are exit signs provided with the work “Exit” in lettering at least 5 inches high and the stroke of the lettering at least ½ inch wide?				
Are exit doors side-hinged?				
Are all exits kept free of obstructions?				
Are at least two means of egress provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?				
Are there sufficient exits to permit prompt escape in case of emergency?				
Do exit doors open outward, to a level surface or stairs?				
Are emergency lights provided and inspected?				
Do all exits operate during a power failure?				
Are exits checked regularly for blockage from outside?				
Exit Doors	**Yes**	**No**	**N/A**	**Comments**
Are doors which are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?				
Are exit doors operable from the direction of exit travel without the use of a key or any special knowledge or effort when the building is occupied?				

Is a revolving, sliding, or overhead door prohibited from serving as a required exit door?				
Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of exit traffic?				
Are doors on cold storage rooms provided with an inside release mechanism which will release the latch and open the door even if it's padlocked or otherwise locked on the outside?				
Where exit doors open directly onto any street, alley, or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping in the path of traffic?				
Spraying Operations	**Yes**	**No**	**N/A**	**Comments**
Is adequate ventilation assured before spray operations are started?				
Is mechanical ventilation provided when spraying operations are done in enclosed areas?				
Is the spray area free of hot surfaces?				
Is the spray area at least 20 feet from flames, operating electrical motors, and other ignition sources?				
Do solvents used for cleaning have a flash point of 100 degrees F or more?				
Are fire control sprinkler heads kept clean?				
Are "No Smoking" signs posted in spray areas, paint rooms, paint booths, and paint storage areas?				
Is the spray area kept clean of combustible residue?				

Are spray booths constructed of metal, masonry, or other substantial noncombustible material?				
Are spray booth floors and baffles noncombustible and easily cleaned?				
Is the spray booth completely ventilated before using the drying apparatus?				
Are lighting fixtures for spray booths located outside of the booth and the interior lighted through sealed clear panels?				
Are the electric motors for exhaust fans placed outside the booths or ducts?				
Are belts and pulleys inside the booth fully enclosed?				
Do ducts have access doors to allow cleaning?				
Do all drying spaces have adequate ventilation?				
Flammable and Combustible Materials	**Yes**	**No**	**N/A**	**Comments**
Are combustible scrap, debris, and waste materials (oily rags, etc.) stored in covered metal receptacles and removed from the worksite promptly?				
Are approved and labeled containers and safety cans and tanks used for the storage and handling of flammable and combustible materials?				
Are all connections on drums and combustible liquid piping , vapor and liquid tight?				
Are all flammable liquids kept in closed containers when not in use (e.g. parts cleaning tank, pans, etc.)?				
Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?				

Do storage rooms for flammable and combustible liquids Have explosion-proof lights				
Do storage rooms for flammable and combustible liquids have mechanical or gravity ventilation?				
Is liquefied petroleum gas stored, handled, and used in accordance with safe practices and standards?				
Are “No Smoking” signs posted on liquefied petroleum tanks?				
Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?				
Are all solvent wastes, and flammable liquids, kept in fire-resistant, covered containers until they are removed from the worksite?				
Are fuel gas cylinders and oxygen cylinders separated by a 20 foot distance, or by fire-resistant barriers, while in storage?				
Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of inside storage areas for such materials?				
Are extinguishers free from obstructions or blockage?				
Are “No Smoking” signs posted where appropriate in areas where flammable or combustible materials are used or stored?				
Are all spills, of flammable or combustible liquids cleaned up promptly?				
Are “No Smoking” rules enforced in areas involving storage and use of hazardous materials?				

Electrical	Yes	No	N/A	Comments
Are multiple-plug adaptors prohibited?				
Are extension cords prohibited from being run through doors and windows?				
If you have any electrical installations in hazardous dust or vapor areas, do they meet the National Electrical Code (NEC) for hazardous locations?				
Is exposed wiring and cords with frayed or deteriorated insulation repaired or replaced promptly?				
Are flexible cords and cables free of splicing or taps?				
Fueling	**Yes**	**No**	**N/A**	**Comments**
Is it prohibited to fuel an internal combustion engine with a flammable liquid while the engine is running?				
Are fueling operations done in such a manner that likelihood of spillage will be minimal?				
When spillage occurs during fueling operations, is the spilled fuel washed away completely, evaporated, or other measures taken to control vapors before restarting engine?				
Are fueling hoses of a type designed to handle the specific type of fuel?				
Is it prohibited to handle or transfer gasoline in open containers?				
Are smoking, open lights, open flames, or sparking, or arcing equipment prohibited near fueling or transfer of fuel operations?				

Are fueling operators prohibited in building or other enclosed areas that are not specifically ventilated for this purpose?				
Where fueling or transfer of fuel is done through a gravity flow system, are the nozzles of the self-closing type?				
Are “Turn Engine Off” and “No Smoking” signs posted at the fuel islands?				
Is a fire extinguisher available in case of emergency?				
Are fuel tanks appropriately labeled “No Smoking”?				
Are above ground tanks protected from spills by a dike?				
Other	**Yes**	**No**	**N/A**	**Comments**