FIRE PREVENTION
Presented by Environmental Health and Safety
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LEARNING OBJECTIVES

- Steps to become proactive in helping prevent fires from starting
- Facts and Information on Fire Safety
- Fire Safety and Life Safety Equipment Maintenance
- How to use a fire extinguisher and how to put out a small fire
- Using what you have learned today about Fire Safety and adding it your life skills.
- Overview of the Greek Housing Inspection Process
- Identifying Violations
OVERVIEW

- Goal of the Training today will be to expand understanding of Fire Safety
  1. Learn about Fire
  2. Description of two Real Fire Incidents
  3. Fire Facts
  4. Fire Extinguisher Training
  5. Fire and Life Safety Equipment
  6. Greek Housing Inspections
  7. Identifying Fire Violations
FIRE SAFETY

- **Fire Triangle**
  1. Fuel Source
  2. Oxygen
  3. Heat
**FIRE IS:**

- HOT
- DEADLY
- FAST
- But mostly fire is HOT
- Remember you will most likely not be able to see anything during a fire and that is why it is important to know two ways out!
FIRE IS HOT!

- General heat production is more threatening than flame contact.
- Room temperatures can be at 250 Degrees Fahrenheit at floor level, rise to 800 Degrees Fahrenheit at eye level and may exceed 1400 Degrees Fahrenheit at the ceiling.
- Inhaling super hot air will scorch your lungs and kill you.
- The heat can melt clothes to your skin.
FIRE TEMPERATURES

- Skin Burns at 130° F
- 3rd Degree Burns start at - 160° F
- Skin Ignites at – 480° F
- Pizza Oven – upwards of 800° F
- Lava – 1300° F to 2400 ° F
- Incinerator – Start around 1400 ° F
- Sun – 6000° F to 11000° F
FIRE IS FAST!

- In less than 30 seconds a small flame can get completely out of control and turn into a major fire.
- It only takes minutes for thick black smoke to fill a house or room.
- There is only time to ESCAPE!
Know how to survive

- Know two ways to get out
- Sound the Alarm
- Don’t ignore alarms
- Warn others
- Crawl low in smoke
- Use Stairwells and emergency escapes
- Importance of Fire Drills – Emergency Evacuations
- Once outside......Stay Outside!
FIRE VIDEO

http://www.metacafe.com/watch/682670/from_living_room_to_inferno_in_under_2_minutes/
FIRE SAFETY

- Fatal Fires at Large
  1. Residential Occupancies
  2. Smoking Leading Cause of Fatal Fires
  3. Missing/Disabled Smoke Alarms
  4. Residential Sprinklers
IMPORTANCE OF FIRE SAFETY

- Seton Hall fire incident in 2000 killed 3 students and injured 58 students and emergency responders
- Fire initially set as a prank by students
- Many injured during escape due to synthetic carpet melting
- Multiple false alarms increased student apathy
- OFPC Fire and Life Safety inspection process in New York universities and colleges created as a result
STATISTICS SINCE SETON HALL FIRE

- Since Seton Hall, 102 college and university students have died in fires in the US; includes fraternities, sororities, off-campus housing and residence halls
- Seton Hall now antiquated in student’s minds
- Student apathy still high due to false alarms
- Emphasized role of Students and Chapter Advisors and importance of fire safety
15th Street Fire

- September 9, 2010
- Off-campus Non-Rensselaer owned residence
- Early morning fire started by flaming alcoholic drink
- Students attempted to extinguish fire (5-10 min)
- Illegal apartment in upstairs of building
- Smoke detectors not working (dead batteries)
- Did not dial 911 immediately when fire lit
- Sparklers/fireworks being used indoors
- 2 students treated at hospital for smoke inhalation
- All belongings destroyed, building total loss
SOME GENERAL FIRE FACTS…

- 1 out of 3 people have an experience with fire
- 4,000 people die each year from fires in the US; one death every two hours; 300,000 homes per year
- 78% of all college fires fatalities happened in off-campus housing
- $11 billion in property loss each year
- A fire department is called every 60 seconds
- Human error most significant aspect of a fire spreading
- Fires kill more Americans than all natural disasters combined
- In 30 seconds, a fire reaches 212°F
- Trash can sized fire doubles size every 30 seconds
TROY FIRE DEPARTMENT

- Fire Fighter SCBA (self-contained breathing apparatus) Gear
- Troy Fire Department demonstrated weight of equipment, time to prepare and how difficult movement is in equipment
Smoke Out

- Residence Hall Smoke-Out
  - Used to simulate low visibility during a fire incident
  - Theater smoke used to create effect
  - Received enthusiastically by students
HOW POOR IS VISIBILITY IN A FIRE?
GREEK LIFE COMMONS AGREEMENT

- **Purpose Statement:** The purpose of the Greek Life Inspection Process is to ensure the safety and well-being of all Greek members that reside in off campus dwellings. In collaboration with Environmental Health and Safety, Human Resources, Life Safety, Environmental and Site Services, Greek Housing, and Student Life we have met to make the inspection process easier to understand by helping provide information and resources that will help contribute to a productive inspection process.
GREEK HOUSING INSPECTIONS

- Initial Inspection
- Follow Up Inspection

*It is important that you provide the Inspectors with any and all documentation during the Inspection*

- Please have either the House Manager, Risk Manager, Chapter Advisor, or President available the day of the Inspection to walk around with the Inspectors
GENERAL CODE PROVISIONS

- New York State Fire Code
  Section (F) 901.6 Inspection, testing, and maintenance.
- Fire detection, alarm, and extinguishing systems shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective.
TOP 4 VIOLATIONS FOUND IN GREEK HOUSES
FIRE EXTINGUISHER TRAINING
OBJECTIVES:

- Things to know before the fire
- Fuel Types
- Extinguisher Types
- When to fight the fire
- How to use a portable fire extinguisher
EXTINGUISHING A FIRE

- Safe Distance – 6 to 8 feet from fire
- Is the fire too big? Can it be contained?
- Slowly approach Fire
- Sweep from side to side – fire will spread
- NEVER turn your back on the fire – It can Re-Ignite!
OPERATION OF A FIRE EXTINGUISHER

- P.A.S.S.
  - Pull the pin
  - Aim for the base of the fire
  - Squeeze the handle
  - Sweep side to side
Classes of Fires

- **A**: Common materials such as paper, wood, or most other combustibles
- **B**: Flammable liquids such as gasoline, paint remover, or grease
- **C**: Electrical fires
- **D**: Combustible metals usually found in industry
Types of Fire Extinguishers most commonly used

- **Types of Fire Extinguishers**
  1. **ABC** – Most Common (Kitchens and Hallways)
  2. **BC** – Cone Shaped (Labs)
  3. **D** – Heavy and large (Industry/Labs)
  4. **K** – Used in Kitchens (Grease and Deep fryers)
FIRE EXTINGUISHERS

- Monthly Inspections
- Annual Inspection
- Hydrostatic Testing and Six Year Maintenance
  1. ABC Fire Extinguishers – 6 Year Tear Down
  2. BC Fire Extinguishers – 5 Year Tear Down
HOW TO INSPECT A FIRE EXTINGUISHER

- Check the Pressure Gauge
- Check the Hose
- Flip the Extinguisher
- Label the Tag with Initials and Date
FIRE ALARM DETECTION SYSTEMS

- System testing required annually
- Unscheduled maintenance
  1. Supervisory: caused by a manipulation in the system
  2. Trouble: caused by a system malfunction
EMERGENCY LIGHTING

- Power provided by batteries and or on-site generator
- Back up system has to be able to sustain emergency lighting for 60 minutes
- Exit Signs must stay illuminated 24/7
FIRE DOORS

- Shall be examined frequently for defects
- Chains, cables, and closers are to be checked frequently for wear and tear.
- Automatic closers shall be operated frequently to ensure proper operation
EFFECTIVENESS OF FIRE DOORS

Evacuation Routes must be posted in common areas and hallways

Important to know two ways out
Smoke Detectors and Carbon Monoxide Detectors

- Smoke Detectors must be present inside every bedroom.
- Carbon Monoxide Detectors need to be present inside every hallway on each floor where bedrooms are located.
DOCUMENTATION

- DOCUMENT EVERYTHING!
- Records of all system testing and maintenance must be maintained for at least one year.
GREEK HOUSING INSPECTION

Required Documentation

1. Fire Alarm System & Alarm Monitoring System (Annual)
2. Monthly Fire Extinguisher Inspections (Monthly)
3. Fire Extinguisher Service (Annual)
4. Sprinkler System (Annual)
5. Kitchen Hood Fire Suppression System (Annual)
6. Kitchen Hood Cleaning (Bi-Annual)
7. Boiler Inspection (once every two years)
8. Fire Drills (Two times per semester)
SPOT THE VIOLATION
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Questions? Comments?

Thank you for your time!