The logo of Galgotias University is a circular emblem with three curved, overlapping bands in shades of yellow, orange, and blue. Below the emblem, the words "GALGOTIAS" and "UNIVERSITY" are written in a large, light grey, serif font.

**Risk Assessment and
Vulnerability Analysis of Residential cum
Commercial
Complex**

Risk Assessment and Vulnerability Assessment of Disaster

Objectives:

- Concept of Risk Assessment and Vulnerability Analysis
- Disaster Management Planning and Case Studies

GALGOTIAS
UNIVERSITY

School of Basic and Applied Sciences

Course Code : MEV313

Course Name: Disaster Management

Risk Assessment, Vulnerability Analysis and Disaster Management Planning in Nutshell:

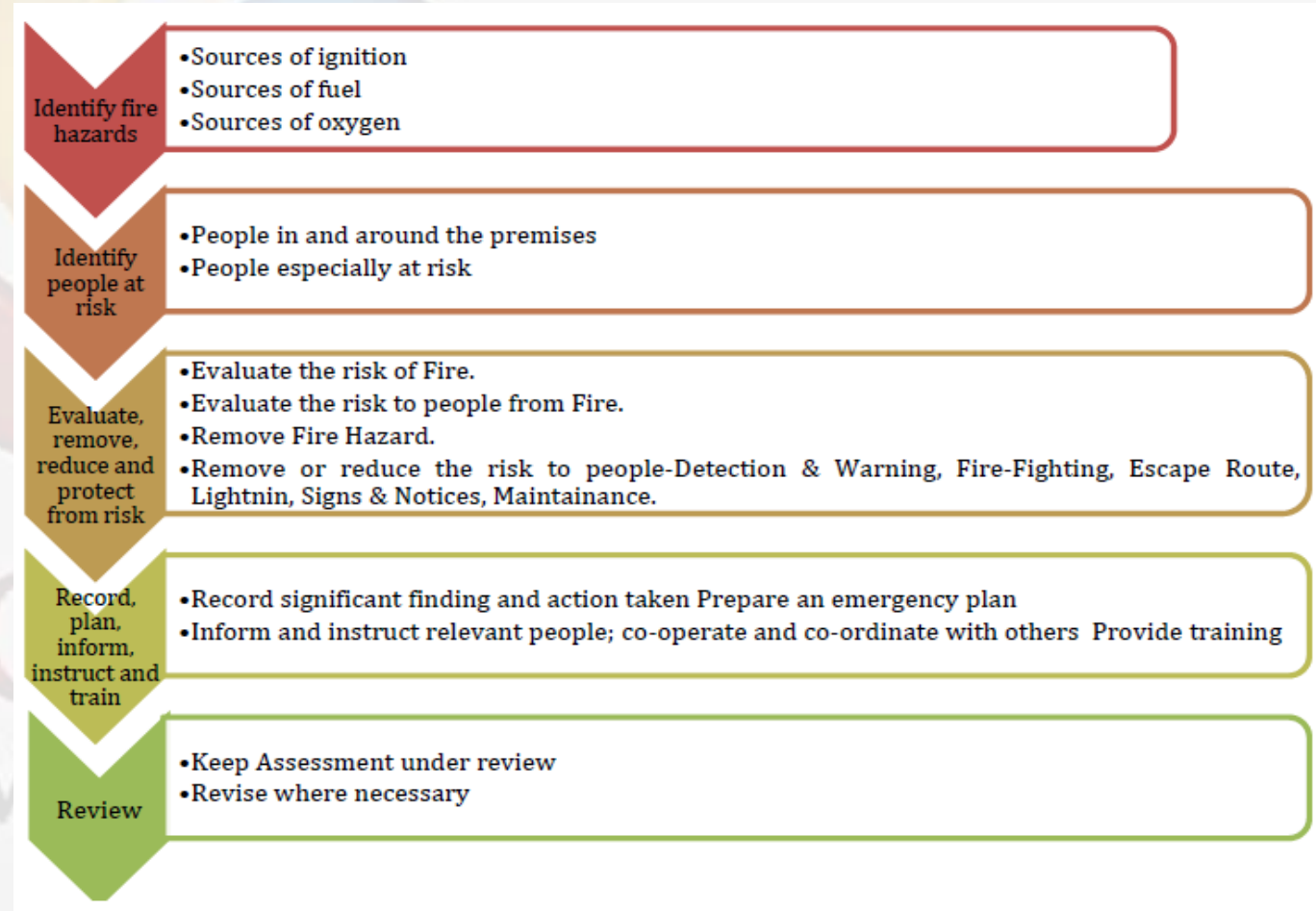


UNIVERSITY

Risk Assessment of Disaster

Steps for Risk Assessment:

1. Identify the hazard
2. Decide who might be harmed and how
3. Evaluate the risks and determine the precautions
4. Record the findings and implementation
5. Review of assessment



Risk Assessment for a Residential cum Commercial Society Complex:

Possible hazards in a residential society can be as follows:

- Fire
- Power or Electrical Hazards
- Lift Failure or Building Collapse

Instructions for occupants in case of any hazard:

- Get out of buildings as quickly and as safely as possible.
- Follow the fire evacuation plan posted in the passageway.
- Go to the nearest refuge floor/evacuation assembly point
- Use the stairs to escape. When evacuating, stay low to the ground.
- If possible, cover mouth with a cloth and avoid inhaling smoke and gases.
- Close doors in each room after escaping to delay the spread of the fire.
- If smoke is pouring in around the bottom of the door or if it feels hot, keep the door closed.
- Open a window to escape or for fresh air while awaiting rescue.
- If there is no smoke at the bottom or top and the door is not hot, then open the door slowly.
- If there is too much smoke or fire in the hall, slam the door shut.
- Stay out of damaged buildings.
- Check that all wiring and utilities are safe.
- Firefighting system is proposed for the project to prevent and control fire outbreaks. The firefighting system will consist of portable fire extinguishers, hose reel, wet riser, yard hydrant, automatic sprinkler system, and manual fire alarm system. The buildings will also be provided with automatic fire detection and alarm system.

Vulnerability Analysis

- In vulnerability analysis, areas which are unable to withstand the effects of the hazard are identified. In a residential cum commercial complex society, vulnerability analysis involves the following hazards.
- Depending on the hazard site, vulnerability analysis changes

Accidents/ Hazards	Mitigation measure
Gas leakage	Turning 'off' gas knobs whenever not in use. Opening up windows and other all source of ventilation so that the gas can escape.
Collapsing of lift	Regular maintenance and checking of the lift. Putting up lift capacity details and sensor inside the lift.
Electric short circuit	Proper insulation of wires. Regular checking of electric boards for any exposed wires and installing automatic trips.

Disaster Management Cycle

- Disaster management aims to reduce or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery.
- The Disaster management cycle illustrates the ongoing process by which governments, businesses, and civil society plan for and reduce the impact of disasters, react during and immediately following a disaster, and take steps to recover after a disaster has occurred.
- The four disaster management phases do not always, or even generally, occur in isolation or in a precise order. Often phases of the cycle overlap and the length of each phase greatly depends on the severity of the disaster.

Four phases of Disaster Management Cycle:

- Mitigation
- Preparedness
- Response
- Recovery

GALGOTIAS
UNIVERSITY

School of Basic and Applied Sciences

Course Code : MEV313

Course Name: Disaster Management

Disaster Management Cycle

- **Mitigation:** Minimizing the effects of disaster. ex: building codes and zoning; vulnerability analyses; public education.
- **Preparedness:** Planning how to respond. ex: preparedness plans; emergency exercises/training; warning systems.
- **Response:** Efforts to minimize the hazards created by a disaster. ex: search and rescue; emergency relief .
- **Recovery:** Returning the community to normal. ex: temporary housing; grants; medical care.



Major Objectives of Disaster Management

The overall objective of a disaster management plan is to make use of the combined resources created or available at the site and/or off-site services to achieve the following:

- Prevent Disasters
- Minimize the effects of the accident on people and property;
- Initiate the rescue and medical treatment of casualties;
- Safeguard other people
- Evacuate people to safe areas with care
- Inform and collaborate with statutory local and state authorities;
- Provide credible information to news media;
- Bring the incident under control;
- Preserve relevant records and equipment for the subsequent enquiry into the cause and circumstances of the emergency;
- Investigate and take steps to prevent recurrence of similar incidents.

School of Basic and Applied Sciences

Course Code : MEV313

Course Name: Disaster Management

References:

1. National Disaster Management Authority, Ministry of Home Affairs, Government of India, May 2016

GALGOTIAS
UNIVERSITY

School of Basic and Applied Sciences

Course Code : MEV313

Course Name: Disaster Management

The logo of Galgotias University is a stylized circular emblem. It features a central white swirl that transitions into a yellow arc at the top, a blue arc on the right, and a red arc at the bottom. The entire emblem is set against a light grey circular background.

Thank You !!!

GALGOTIAS
UNIVERSITY