

# AMSE27 DISASTER MANAGEMENT

## UNIT-1 IMPORTANCE OF DISASTER MANAGEMENT FOR CHEMICAL INDUSTRY

- 1.1 Types of emergencies
- 1.2 Major industrial disasters
- 1.3 Causes and consequences of major industrial disasters like Flixborough, Seveso and Bhopal.
- 1.4 Components of a major hazard control system
- 1.5 Identification of major hazard control installations- purpose and procedures-
- 1.6 Safe operation of major hazard installations- mitigation of consequences-
- 1.7 Reporting to authorities.
- 1.8 Implementation of major hazard control systems
- 1.9 Group of experts- training- checklists- inspection- evaluation of major hazards
- 1.10 Information to the public- manpower requirements- sources of information

## UNIT-2 EMERGENCY PLANNING

- 2.1 On-site and off-site emergency plan- need of plan- possible approach-
- 2.2 Objectives of emergency plan.
- 2.3 On-site emergency planning- formulation of the plan and emergency services
- 2.4 Identification of resources- actions and duties- emergency procedure- mock drills.
- 2.5 Off-site emergency planning- objectives and elements of off-site plan
- 2.6 Role of administrative machinery- role of major hazard works management
- 2.7 Role of the local authority.
- 2.8 Emergency preparedness at local level
- 2.9 Awareness and preparedness for emergencies at local level (APELL)
- 2.10 The process and its partners.

## UNIT-3 REQUIREMENTS OF EMERGENCY PLAN

- 3.1 as per Indian legislations like Factories Act, Manufacture,
- 3.2 Storage and Import of Hazardous Chemicals Rules,
- 3.3 Chemical Accidents (Emergency planning, Preparedness and Response) Rules.
- 3.4 Emergency planning and preparedness in international standards like ISO 14001,
- 3.5 OHSAS 18001 and OSHA's Process Safety Management System,
- 3.6 Emergency Planning in Seveso II directive- elements of emergency planning in IS: 18001
- 3.7 Hazardous Materials/Spills Emergencies
- 3.8 Contingency plans for road transportation of hazardous chemicals- contingency plans for oil spills in marine environment.

## UNIT-4 NATURAL HAZARDS

- 4.1 Potentially hazardous natural phenomena- earthquakes- landslides- flooding-
- 4.2 Cyclones- hazards in arid and semi-arid areas- nature of the hazard-
- 4.3 Hazard management activities- disaster mitigation
- 4.4 Natural hazard prediction- emergency preparedness
- 4.5 Disaster, rescue and relief

- 4.6 Postdisasterrehabilitation and reconstruction
- 4.7 Education and training activities
- 4.8 Vulnerable elements to be considered in the development planning for natural hazard management
- 4.9 Applications of remote sensing and GIS in disaster management.

**References Books:**

1. ILO, Geneva: Major Hazard Control – a Practical Manual.
2. UNEP, Paris : APELL - A Process for responding to technological accidents , A Handbook, Industry & Environment Office.,1998
3. Accident Prevention Manual for Business and Industry, Vol.I–National Safety Council, USA.
4. Oil spill Response: The National Contingency Plan - Institute of Petroleum, London

