## SR UNIVERSITY

## DEPARTMENT OF CIVIL ENGINEERING

## DISASTER MANAGEMENT

**UNIT I Introduction**

Disaster- Overview of Disaster Management (DM) - Concepts and definitions - Disaster, hazard, vulnerability, risk, capacity, impact, prevention, mitigation - criticality.

**UNIT II Natural Disasters**

Meaning and nature of natural Disasters, their types and effects- floods, Drought, Cyclone, Earthquakes, Tsunami, Volcanoes, Coastal erosion, Climate Change- Global warming, Sea level rise, Ozone depletion.

**UNIT III Manmade Disasters**

Nuclear disaster, Chemical disaster, building fire, coal fire, forest fire, oil fire, air pollution, water pollution, Deforestation, epidemics and pandemics, Road accidents, Rail accidents, Air accidents, Sea accidents.

**UNIT IV Disaster Risk Reduction**

Process to migrate disaster at national and global level - International strategy for disaster reduction- Concept of disaster management - National disaster management framework - Financial agreements - Role and responsibilities of NGO’s - Community based organization and media Central - State - District and local administration - Armed forces in disaster response- Police and other organizations.

**UNIT V Case studies and Project Work**

Project work for students to understand vulnerabilities and to work in reducing disaster risks and to build a culture of safety. E.g. remote sensing and GIS/GPS for disaster management, dams, urbanization - Projects must be conceived creatively based on the geographic location and hazard profile of a region.

Case Studies – Students should be taught with at least 10 different case studies about natural and manmade disasters.