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.