

# Syllabus for audit course in Disaster Management –AUD02

DEPARTMENT OF GEOLOGY & ENVIRONMENTAL SCIENCE

CHRIST COLLEGE (AUTONOMOUS), IRINJALAKUDA

## MODULE

1:

Introduction – Hazard and Disaster. Concepts of Hazard, Vulnerability, Risks. Different Types of Disaster : A) Natural Disaster: such as Flood, Cyclone, Earthquakes, Landslides etc B) Manmade Disaster: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters, Accidents (Air, Sea, Rail & Road), Structural failures (Building and Bridge), War & Terrorism etc. Slow Disasters (famine, draught, epidemics) and Rapid Onset Disasters (Air Crash, tidal waves, Tsunami) Causes, effects and practical examples for all disasters. Water and Climate Disaster: flood, hail storms, cloudburst, cyclones, heat and snow avalanches, cold waves, droughts, sea erosion, thunder and lightning. Geological Disaster: landslides, earthquakes, Tsunami, mine fires, dam failures and general fires. Biological Disaster: epidemics, pest attacks, cattle epidemic and food poisoning. Nuclear and Industrial Disaster: chemical and industrial disasters, nuclear accidents. Accidental Disaster: urban and forest fires, oil spill, mine flooding incidents, collapse of huge building structures.

## MODULE

2:

Natural disasters- Earthquakes, Tsunami, Floods, Drought, Landslides, Cyclones and Volcanic eruptions. Their case studies. Coastal disasters. Coastal regulation Zone. Risk and Vulnerability Analysis 1. Risk : Its concept and analysis 2. Risk Reduction 3. Vulnerability : Its concept and analysis 4. Strategic Development for Vulnerability Reduction . Disaster Prevention and Mitigation. Refugee operations during disasters, Human Resettlement and Rehabilitation issues during and after disasters, Inter-sectoral coordination during disasters, Models in Disasters.

## MODULE

3:

Disaster Preparedness and Response Concept and Nature Disaster Preparedness Plan Prediction, Early Warnings and Safety Measures of Disaster. Role of Information, Education, Communication, and Training, Disaster Management : Role of Government, International and NGO Bodies. Role of IT in Disaster Preparedness Role of Engineers on Disaster Management. Response Disaster Response : Introduction Disaster Response Plan Communication, Participation, and Activation of Emergency Preparedness Plan Search, Rescue, Evacuation and Logistic Management Role of Government, International and NGO Bodies Psychological Response and Management (Trauma, Stress, Rumor and Panic) Relief and Recovery Medical Health Response to Different

Disasters.

**MODULE 4:**

Rehabilitation, Reconstruction and Recovery Reconstruction and Rehabilitation as a Means of Development. Damage Assessment Post Disaster effects and Remedial Measures. Creation of Long-term Job Opportunities and Livelihood Options, Disaster Resistant House Construction Sanitation and Hygiene Education and Awareness, Dealing with Victims' Psychology, Longterm Counter Disaster Planning Role of Educational Institute.

**MODULE 5:**

The vulnerability atlas of India. Disaster Prevention and Mitigation. Agencies involved in Disaster Management. Warning and Prediction

**ESSENTIAL READING:**

1. Pandey, M., 2014. Disaster Management, Wiley India Pvt. Ltd., 240p.
2. Tushar Bhattacharya, Disaster Science and Management, McGraw Hill Education (India) Pvt. Ltd
3. Jagbir Singh, Disaster, Management: Future Challenges and Opportunities, K W Publishers Pvt. Ltd.
4. J.P. Singhal, Disaster Management, Laxmi Publications
5. C. K. Rajan, Navale Pandharinath, Earth and Atmospheric Disaster Management : Nature and Manmade, B S Publication
6. Shailesh Shukla, Shamna Hussain, Biodiversity, Environment and Disaster Management, Unique Publications