

**TEZPUR UNIVERSITY**  
Centre for Disaster Management

CBCT / Open Elective Course at UG Level

**SYLLABUS**

Course code	Course Name	Credit	L	T	P
DM 101	Disaster Management	3	2	1	0

**Unit 01: Understanding disaster phenomena**

Concept and definitions of different terms of disaster; Approaches to understand disaster phenomena (*natural science, applied science, progressive and holistic approaches*); Parameters of Disaster Risk; Levels of disaster as per national guideline.

**Unit 02: Overview, classification, characteristics, problem areas of disasters**

Disaster trends (*Global, national and regional*); Selected models for understanding the causes of disaster and disaster risk mitigation; Classification of hazards (*natural and manmade*); Response time, frequency, forewarning, exposure time of different hazards; General characteristics and problem areas of different natural and man-made hazards (*e.g. flood, erosion, earthquake, landslide, lightning, tropical cyclone, drought, civil unrest etc.*); Common approaches to study natural and manmade hazards; vulnerability and disasters.

**Unit 03: Disaster risk mitigation**

Disaster risk assessment (*Hazard-Vulnerability-Capacity analysis*), Hazard mapping and forecasting; Principles and aspects of; Disaster prevention; Disaster mitigation; Preparedness for damage mitigation and coping with disasters; Capacity building for disaster/damage mitigation (structural and non-structural measures); Contingency planning for damage mitigation of different hazards; Relevance of indigenous knowledge, appropriate technology and local resources in disaster risk mitigation; Community based disaster risk reduction mechanism; Counter disaster resources and their roles.

**Unit 04: Environment and disasters**

Environment, ecosystem and disasters; Climate change – issues and concerns; Industrial hazards and safety measures; Post disaster impact on environment; Impact of developmental projects on disaster risk; Aspects of environmental management for disaster risk reduction; Environmental Impact Assessment (*EIA*).

**Unit 05: Planning for disaster management**

Community-hazard profile in India; Different phases of Disaster Management (*DM cycle*); Relief mechanism (*needs assessment, relief administration and distribution, management of relief centres, external support etc.*); Compensation and insurance; Planning strategies (*state and district DM planning*); planning needs; Disaster Management Act (2005); Disaster Management Policy (2009); organizational framework for disaster management in India.

## **Unit 06: Field work / Case studies**

- Hazard mapping of vulnerable areas
- Vulnerability assessment (*physical, social, organizational, economical, technological*)
- Risk mitigation planning for vulnerable areas.

### **Text books**

1. Alexander, D. *Natural Disasters*, ULC press Ltd, London, 1993.
2. Carter, W. N. *Disaster Management: A Disaster Management Handbook*, Asian Development Bank, Bangkok, 1991.

### **Reference books / papers**

1. *Disaster Management in India*, Ministry of Home Affairs, Government of India, New Delhi, 2011.
2. *National Policy on Disaster Management*, NDMA, New Delhi, 2009.
3. *Disaster Management Act. (2005)*, Ministry of Home Affairs, Government of India, New Delhi, 2005.
4. *District Disaster Management Plan-Model Template*, NIDM, New Delhi, 2005.
5. A Global Report - Reducing Disaster Risk, A Challenge for Development; UNDP Publication, 2004.
6. Good practices in community based disaster risk management; GoI-UNDP Disaster Risk Management Programme; 2002 – 09.
7. Alexander, D. *Introduction in Confronting Catastrophe*, Oxford University Press, 2000
8. Chakrabarty, U. K. *Industrial Disaster Management and Emergency Response*, Asian Books Pvt. Ltd., New Delhi 2007.
9. *Geomorphological Techniques* by Andrew Goudie, Published by Academic Division of Unwin Hyman Ltd. London, UK, 1990.
10. Parasuraman, S & Unnikrishnan, P. V. (ed.), *India Disasters Report Towards a policy initiative*. Oxford, 2000.
11. Valdiya, K. S., *Environmental geology Indian context*. Tata McGraw Hills, 1987.