

Tezpur University
Centre for Disaster Management

Choice Based Credit Transfer (CBCT) Course at UG Level

Course name : Disaster Management
Course code : DM 101
Total credit : 3 (three); (*L: 2 T: 1 P:0*)

Syllabus

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.