

CENTRE FOR DISASTER MANAGEMENT
Tezpur University, Tezpur, Sonitpur, Assam

Open Elective Course for PG Students

Curriculum and syllabus

Course code	Course Name	L	T	P	Credit	Level
DM 501	Disaster Management Mechanism	3	0	0	3	PG (All streams)

Context

Disaster risk mitigation is the foundation of sustainable development. Unresolved problems associated with unsustainable developments across the globe are mainly responsible for increasing trends of disaster events. A practical disaster management plan not only gives due emphasis on pre disaster risk mitigation measures, but also considers the scopes to deal with post-disaster issues and concerns for mitigating damage, loss and negative impacts. This particular course is designed to deliberate on various issues relevant to disaster risk assessment and risk mitigation planning. Due importance has also been given to cover the aspects of disaster response and techniques of post-disaster needs assessment (PDNA).

Course objectives

- To impart in-depth knowledge of different aspects of the management of natural and man made disasters.
- To improve personal management skills and inter-organizational cooperation related to disaster management planning, training and public awareness.

Prerequisites of the course

Students of PG programmes from any discipline (Science, Engineering, Management, Social Science, Humanities etc.) may join in this course.

Course Contents

Unit 01: Concept and approaches of disaster risk assessment

- Perception of disaster risk.
- Prime conditions for occurrence of disaster like situation in a system.
- Parameters of disaster risk and methods of disaster risk assessment.
- Selective models and approaches to study disaster risk of any vulnerable system.
- Hazard typology and classification.
- Overview on global and national disaster vulnerability scenario.

Unit 02: Understanding parameters of disaster risk

- Hazards, Vulnerability and Risk Assessment (HVRA).
- Hazard zoning.
- Useful tools of HVRA.
- Parameters to study impact rating of hazards and hazard zoning.
- Characteristics, causes, warning signs and damage potentials of different natural hazards.
- Dimensions of vulnerability factors.
- Hazard specific vulnerability assessment pertaining to some selective hazards.

Unit 03: Scopes of and criteria for disaster risk mitigation, response and recovery

- Concepts of risk management and crisis management.
- Disaster management cycle.
- Scopes of and criteria of prevention and mitigation of disasters.
- Aspects of disaster response and Recovery.
- Important criteria of relief Mechanism.

Unit 04: Capacity-building and coping strategies for DRM

- Needs and aspects of capacity building.
- Structural and nonstructural measures for damage mitigation.
- Counter-disaster resources and their services in disaster management.
- Philosophy, fundamental factors and common measures relevant to coping strategies.
- Alternative adjustment processes for coping with disasters.
- Principles of community based disaster management (CBDM).
- Basic fire and industrial safety norms and practices.

Unit 05: Disaster management planning

- Important criteria for practical disaster management planning.
- Steps in formulating a disaster risk reduction plan.
- Objectives and provisions of Disaster Management Act 2005.
- Important recommendations of NPDM – 2009 pertaining to DRM and sustainable development.
- Legal-organisational structure for disaster management in India.
- Frameworks of state and district disaster management plans.

Unit 06: Post-Disaster Needs Assessment (PDNA)

- Importance of PDNA in disaster management.
- Concept of damage, loss and negative impacts related to disaster events.
- Conceptual framework and methodology of PDNA.
- Sector specific standard assessment procedure relevant to PDNA.
- Scenario building exercise on disaster risk assessment and PDNA.

Learning outcomes

The course structure has prospects to empower the learners for,

- assessing disaster risk of any micro or macro system based on hazard and vulnerability analysis.
- contributing to disaster risk mitigation planning and post disaster needs assessment process.

Suggested books

1. Etkin, D. *Disaster Theory: An Interdisciplinary Approach to Concepts and Causes*, Elsevier Science & Technology, 2015.
2. Chakrabarty, U. K. *Industrial Disaster Management and Emergency Response*, Asian Books Pvt. Ltd., New Delhi 2007.
3. Alexander, D. *Natural Disasters*, ULC press Ltd, London, 1993.
4. Carter, W. N. *Disaster Management: A Disaster Management Handbook*, Asian Development Bank, Bangkok, 1991.