

# GUJARAT TECHNOLOGICAL UNIVERSITY

## CIVIL (CONSTRUCTION ENGINEERING AND MANAGEMENT) (14)

DISASTER MANAGEMENT

SUBJECT CODE: 2721412

SEMESTER: II

**Type of course: OPEN ELECTIVE**

**Prerequisite:**

**Rationale:**

**Teaching and Examination Scheme:**

Teaching Scheme			Credits C	Examination Marks						Total Marks
L	T	P		Theory Marks		Practical Marks				
			ESE (E)	PA (M)	ESE (V)		PA (I)			
					ESE	OEP	PA	RP		
3	2#	2	5	70	30	20	10	10	10	150

**Content:**

Sr. No.	Content	Total Hrs	% Weightage
<b>1</b>	<p><b>Objectives</b></p> <p>Overview of Disaster Management - Distinguishing between an emergency and a disaster situation. Disaster Management Cycle - Phase I: Mitigation, and strategies; hazard identification and vulnerability analysis. Disaster Mitigation and Infrastructure, impact of disasters on development programmes, vulnerabilities caused by development, developing a draft country-level disaster and development policy</p>	<b>12</b>	
<b>2</b>	<p><b>Phases</b></p> <p>Disaster Management Cycle - Phase II: Preparedness, Disaster Risk Reduction (DRR), Emergency Operation Plan (EOP), Mainstreaming Child Protection and Gender in Emergency Planning, Assessment, Disaster Management Cycle - Phases III and IV: Response and recovery, Response aims, Response Activities, Modern and traditional responses to disasters, Disaster Recovery, and Plan , Disasters as opportunities for development initiatives</p>	<b>12</b>	
<b>3</b>	<p><b>Disaster Community</b></p> <p>Community-based Initiatives in Disaster management, need for Community-Based Approach, categories of involved organizations: Government, Non-government organizations (NGOs), Regional And International Organizations, Panchayaths, Community Workers, National And Local Disaster Managers, Policy Makers, Grass-Roots Workers, Methods Of Dissemination Of Information, Community-Based Action Plan, Advantages/Disadvantages Of The Community-Based Approach</p>	<b>12</b>	

<b>4</b>	<b>Disaster Planning</b> Disaster Response Personnel and duties, Community Mitigation Goals, Pre-Disaster Mitigation Plan, Personnel Training, Volunteer Assistance, School-based Programmes, Hazardous Materials, Ways of storing and safely handling hazardous materials, Coping with Exposure to Hazardous Materials	<b>16</b>	

**Reference Books:**

1. Ayaz, Disaster Management: Through the New Millennium. Anmol Publications. (2009)
2. Dave, P. K. Emergency Medical Services and Disaster Management: A Holistic Approach. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd., 2009
3. Narayan, B. Disaster Management, New Delhi: A.P.H. Publishing Corporation ,2009
4. Kumar, N. Disaster Management. New Delhi: Alfa Publications. ,2009
5. Ghosh, G. K., Disaster Management. New Delhi: A.P.H Publishing Corporation. ,2008
6. Goel, S. L., Disaster Management. New Delhi: Deep & Deep Publication Pvt. Ltd. ,2008
7. Singh, R. B. Disaster Management. New Delhi: Rawat Publications., 2008.
8. Construction Engineering and Management – Seetharaman, Umesh Publications
9. CE&CR's Journals
10. NICMAR Publications

**Course Outcome:**

After learning the course the students should be able to:

decide emergency, vulnerability and the importance of disaster management to handle the situation.

prepare damage assessment of natural and manmade disasters.

work out financing relief expenditures and distribution program.

prepare emergency management program.

**List of Experiments/Tutorials:**

- Case study of flood disaster.
- Case study of earthquake disaster.
- Case study of fire disaster.
- Case study of cyclon disaster.
- Case study of explosion disaster.