MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act,1956

COURSE CONTENT

DISASTER MANAGEMENT								
II SEMESTER								
Course Code	**Category**	**Hours/Week**			**Credits**	**Maximum Marks**		
		L	**T**	**P**	**C**	**CIE**	**SEE**	**Total**
24MB014B	**Open Elective**	4	-	-	4	40	60	100
Contact Classes:60	**Tutorial Classes:** Nil	**Practical Classes:** Nil				**Total Classes:** 60		
Prerequisite: Basic concepts of Disaster Management.								

COURSE OVERVIEW:

This course introduces students to the concepts, principles, and practices of disaster management. It examines natural and man-made disasters and their socio-economic impacts. The course also emphasizes risk assessment, disaster preparedness, mitigation strategies, emergency response, and recovery planning, along with the role of government, organizations, and communities in disaster management.

COURSE OBJECTIVES:

- Understand the nature, types, and causes of disasters.
- Study the principles and phases of disaster management.
- Develop knowledge of risk assessment and disaster mitigation strategies.
- Understand the role of government agencies, NGOs, and communities in disaster response.
- Enhance the ability to plan and manage disaster preparedness and recovery activities.

COURSE OUTCOMES: After Completion of the course, students should be able to

1. Explain concepts, types, approaches related to environmental hazards, stress, disasters within human ecological contexts.
2. Classify natural, planetary, extra-planetary, human-induced environmental hazards based on origin, impact.
3. Analyse causes, distribution, environmental effects of endogenous hazards comprising volcanoes, earthquakes, landslides.
4. Evaluate impacts, perceptions, mitigation measures of exogenous hazards encompassing cyclones, floods, droughts, soil erosion.
5. Assess chemical, biological, sedimentation-related hazards emphasizing preventive, corrective, rehabilitation strategies.

UNIT-I: ENVIRONMENTAL HAZARDS & DISASTERS

Meaning of Environmental hazards, Environmental Disasters and Environmental stress. Concept of Environmental Hazards, Environmental stress & Environmental Disasters. Different approaches & relation with human Ecology - Landscape Approach - Ecosystem Approach –Perception approach – Human ecology & its application in geographical researches.

UNIT-II: TYPES OF ENVIRONMENTAL HAZARDS & DISASTERS

Natural hazards and Disasters - Man induced hazards & Disasters - Natural Hazards – Planetary Hazards / Disasters - Extra Planetary Hazards / disasters - Planetary Hazards – Endogenous Hazards- Exogenous Hazards

UNIT-III: ENDOGENOUS HAZARDS

Volcanic eruption – Earthquakes – landslides – Volcanic Hazards/Disasters-Causes and distribution of Volcanoes - Hazardous effects of volcanic eruptions - Environmental impacts of volcanic eruptions

- Earthquake Hazards / disasters - Causes of Earthquakes - Distribution of earthquakes- Hazardous effects of - earthquakes – Earthquake Hazards in India – Human adjustment, perception &mitigation of earthquake.

UNIT-IV: EXOGENOUS HAZARDS/DISASTERS

Infrequent events-Cumulative atmospheric hazards / disasters. Infrequent events: Cyclones - Lightning – Hailstorms. Cyclones: Tropical cyclones & Local storms - Destruction by tropical cyclones &local storms (causes, distribution human adjustment, perception & mitigation) Cumulative atmospheric hazards/ Disasters: -Floods -Droughts- Coldwaves –Heal waves Floods: -Causes of floods-Flood hazards India. Flood control measures (Human adjustment, perception &mitigation) Droughts: - Impacts of droughts-Drought hazards in India-Drought control measures- ExtraPlanetaryHazards/Disasters-maninducedHazards/Disasters-Physicalhazards /Disasters-Soil erosion Soil Erosion: Mechanics & forms of Soil Erosion - Factors7causes of Soil Erosion- Conservation measures of Soil Erosion.

UNIT-V: EMERGING APPROACHES IN DISASTER MANAGEMENT- THREE STAGES CHEMICAL HAZARDS/DISASTERS

Release of toxic chemicals, nuclear explosion-Sedimentation processes Sedimentation processes: - Global Sedimentation problems Regional Sedimentation problems – Sedimentation & Environmental problems –Corrective measures of Erosion & Sedimentation.

Biological hazards /disasters: Population Explosion-Pre-disaster Stage (preparedness)-Emergency Stage-Post Disaster stage–Rehabilitation.

TEXT BOOKS:

1. R.B. Singh (Ed) Disaster Management, Rawat Publication, NewDelhi,2000.
2. H.K. Gupta (Ed) Disaster Management, Universities Press, India, 2003.
3. Savinder Singh Environmental Geography, Prayag Pustak Bhawann,1997.
4. Kates, B.I & White, G. F the Environment as Hazards, oxford, New York, 1978.

5. R.B. Singh, Space Technology for Disaster Mitigation in India (INCED), University of Tokyo, 1994Publications, 9e, 2020.

REFERENCE BOOKS:

1. Manual on natural disaster management in India, M C Gupta, NIDM, New Delhi
2. R K Bhandani, "An overview on natural & man-made disasters and their reduction", CSIR, New Delhi
3. World Disasters Report, International Federation of Red Cross and Red Crescent, Switzerland, 2009.
4. Coppola D P, "Introduction to International Disaster Management", Elsevier Science (B/H), London, 2007.

ELECTRONIC RESOURCES:

1. https://ssp.nidm.gov.in/
2. https://revenue.py.gov.in/disaster-basics.html
3. https://disaster.shiksha/introduction-to-disaster-management/
4. https://www.gdrc.org/uem/disasters/1-introduction.html
5. https://www.wvi.org/disaster-management/what-disaster-management

MATERIALS ONLINE:

1. Course template
2. Tutorial question bank
3. Tech talk and Concept Video topics
4. Open-ended experiments
5. Definitions and terminology
6. Assignments
7. Model question paper – I
8. Model question paper – II
9. Lecture notes
10. PowerPoint presentation
11. Drishya Siksha Sangrah (DSS) Videos