



## SRI VENKATESWARA COLLEGE OF ENGINEERING

## COURSE DELIVERY PLAN - THEORY

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Department of Chemical Engineering		LP:GE18053
B.E/B.Tech/M.E/M.Tech : Chemical Engineering	Regulation:2018A	Rev. No: 00
PG Specialisation : NA		Date:
Sub. Code / Sub. Name : <b>GE18053 DISASTER MANAGEMENT</b>		09/07//2024
Unit : I		

**Unit Syllabus: INTRODUCTION TO DISASTERS**

Concepts, and definitions (Disaster, Hazard, Vulnerability, Resilience, Risks). Classification, Causes, Impacts (including social, economic, political, environmental, health, psychosocial, etc. ), Differential impacts- in terms of caste, class, gender, age, location, disability, Global trends in disasters, urban disasters, pandemics, complex emergencies, Climate Change- Dos And Don'ts During Various Types Of Disasters.

**Objective:** Understand disaster concepts, impacts, differential effects, global trends, and best practices for preparedness and response.

Session No *	Topics to be covered	Ref	Teaching Aids
1	Introduction of disaster management	T1-ch.1; pg. 1	PPT/ BB/Online
2	Concepts, and definitions of Disaster	T1-Ch.1; pg. 1-2	PPT/ BB/Online
3	Hazard, Vulnerability, Resilience, Risks	T1-ch.1; pg. 1	PPT/ BB/Online
4	Classification, Causes, Impacts	T1-Ch.1; pg. 2-6	PPT/ BB/Online
5	Differential impacts- in terms of caste, class, gender, age, location, disability	T1-Ch.1; pg. 2-6	PPT/ BB/Online
6	Global trends in disasters	T1-Ch.1; pg. 7-8	PPT/ BB/Online
7	Urban disasters	T1-Ch.1; pg.8-9	PPT/ BB/Online
8	Pandemics, complex emergencies	T1-Ch.3; pg.75	PPT/ BB/Online
9	Climate change- dos and donts during various types of disasters.	T4-Ch.7; pg.108	PPT/ BB/Online

**Content beyond syllabus covered (if any):**

\* Session duration: 50 minutes





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Sub. Code / Sub. Name: : GE18053 DISASTER MANAGEMENT

Unit : II

**Unit Syllabus: APPROACHES TO DISASTER RISK REDUCTION (DRR)**

Disaster Risk Reduction Strategies, Disaster Cycle, Phases of Disaster, Preparedness Plans, Action Plans and Procedures, Early warning Systems, Models in disaster preparedness, Components of Disaster Relief (Water, food, sanitation, shelter, Health and Waste Management), Community based DRR, Structural nonstructural measures in DRR, Factors affecting Vulnerabilities, Mainstreaming disaster risk reduction in development, Undertaking risk and vulnerability assessments, Policies for Disaster Preparedness Programs, Preparedness Planning, Roles and Responsibilities, Public Awareness and Warnings, Rehabilitation measures and long term reconstruction.

**Objective:** Apply disaster risk reduction strategies, phases, preparedness plans, early warning systems, relief components, community-based measures, vulnerability factors, and long-term rehabilitation.

Session No *	Topics to be covered	Ref	Teaching Aids
10	Introduction to disaster risk reduction - Strategies, Disaster Cycle, Phases of disaster	T1-Ch.2; pg. 12-13	PPT/ BB/Online
11	Preparedness Plans, Action Plans and Procedures, Early warning Systems, Models in disaster preparedness	T1-Ch.2; pg. 13-14	PPT/ BB/Online
12	Components of Disaster Relief - Water, food, sanitation, shelter, Health and Waste Management	T1-Ch.2; pg. 13-14	PPT/ BB/Online
13	Community based DRR and Structural nonstructural measures in DRR	T1-Ch.2; pg. 23-24	PPT/ BB/Online
14	Factors affecting Vulnerabilities	T1-Ch.2; pg. 20-21	PPT/ BB/Online
15	Mainstreaming disaster risk reduction in development	T4-Ch.2; pg. 08	PPT/ BB/Online
16	Undertaking risk and vulnerability assessments	T1-Ch.2; pg. 20-21	PPT/ BB/Online
17	Policies for Disaster Preparedness Programs, Preparedness Planning	T4-Ch.9; pg. 120	PPT/ BB/Online
18	Roles and Responsibilities, Public Awareness and Warnings	T1-Ch.2; pg. 16-17	PPT/ BB/Online
19	Rehabilitation measures and long-term reconstruction	T1-Ch.2; pg. 22	PPT/ BB/Online

**Content beyond syllabus covered (if any):**

\* Session duration: 50 mins





Sub. Code / Sub. Name: : GE18053 DISASTER MANAGEMENT

Unit : III

**Unit Syllabus: INTER-RELATIONSHIP BETWEEN DISASTERS AND DEVELOPMENT**

Factors affecting vulnerabilities, differential impacts, impact of Development projects such as dams, embankments, changes in land-use etc.- Climate Change Adaptation- IPCC Scenario and Scenarios in the context of India – Relevance of indigenous knowledge, appropriate technology and local resources.

**Objective:** Develop knowledge on vulnerabilities, differential impacts, development project effects, climate change adaptation, and the relevance of indigenous knowledge.

Session No *	Topics to be covered	Ref	Teaching Aids
20	Introduction to inter-relationship between disasters and development	T4-Ch.2; pg.8	PPT/ BB/Online
21	Factors affecting vulnerabilities	T1-Ch.2; pg.8	PPT/ BB/Online
22	Differential impacts	T4-Ch.9; pg.120	PPT/ BB/Online
23	Impact of Development projects such as dams, embankments, changes in land-use etc.	T4-Ch.1; pg.3	PPT/ BB/Online
24	Climate change adaptation	T4-Ch.2; pg.26	PPT/ BB/Online
25	IPCC Scenario and Scenarios in the context of India	T4-Ch.3; pg.74	PPT/ BB/Online
26	Relevance of indigenous knowledge	T4-Ch.2; pg.31	PPT/ BB/Online
27	Appropriate technology	T4-Ch.3; pg.75	PPT/ BB/Online
28	Local resources	T4-Ch.2; pg.9	PPT/ BB/Online

**Content beyond syllabus covered (if any):**

\* Session duration: 50 mins





Sub. Code / Sub. Name: : GE18053 DISASTER MANAGEMENT  
Unit : IV

Unit Syllabus: **DISASTER MANAGEMENT MECHANISM**

Hazard and Vulnerability profile of India, Components of Disaster Relief: Water, Food, Sanitation, Shelter, Health, Waste Management, Institutional arrangements (Mitigation, Response and Preparedness, Disaster Management Act and Policy – Other related policies, plans, programs and legislation – Role of GIS and Information Technology Components in Preparedness, Risk Assessment, Response and Recovery Phases of Disaster – Disaster Damage Assessment.

Objective: Analyze India's hazard and vulnerability profile, disaster relief components, institutional arrangements, related policies, GIS and IT roles, and disaster damage assessment.

Session No *	Topics to be covered	Ref	Teaching Aids
29	Introduction to disaster management mechanism	T4-Ch.2; pg.8	PPT/ BB/Online
30	Hazard and Vulnerability profile of India	T4-Ch.1; pg.8-9	PPT/ BB/Online
31	Components of Disaster Relief - Water, Food, Sanitation, Shelter, Health	T4-Ch.11; pg.156	PPT/ BB/Online
32	Waste Management	T4-Ch.04; pg.93	PPT/ BB/Online
33	Institutional arrangements Mitigation, Response and Preparedness	T4-Ch.04; pg.108-109	PPT/ BB/Online
34	Disaster Management Act and Policy	T4-Ch.10; pg.128	PPT/ BB/Online
35	Other related policies, plans, programs and legislation	T4-Ch.10; pg.129	PPT/ BB/Online
36	Role of GIS and Information Technology	T4-Ch.11; pg.146	PPT/ BB/Online
37	Components in Preparedness, Risk Assessment, Response and Recovery Phases of Disaster – Disaster Damage Assessment.	T4-Ch.02; pg.31	PPT/ BB/Online
<b>Content beyond syllabus covered (if any):</b>			

\* Session duration: 50 mins





Sub. Code / Sub. Name : GE18053 DISASTER MANAGEMENT

Unit : V

**Unit Syllabus: DISASTER MANAGEMENT: APPLICATIONS AND CASE STUDIES AND FIELD WORKS.**

Cases Studies: Bhopal Gas Disaster, Gujarat Earthquake, Orissa Super-cyclone, South India Tsunami, Bihar floods, Plague Surat, Landslide in North East, Heat waves of AP & Orissa, Cold waves in UP. Bengal famine, best practices in disaster management, Local Knowledge Appropriate Technology and local Responses, Development projects in India (dams, SEZ) and their impacts.

**Objective:** Aware major Indian disasters, best practices in disaster management, local knowledge, appropriate technology, and the impacts of development projects.

Session No *	Topics to be covered	Ref	Teaching Aids
38	Cases Studies: Bhopal Gas Disaster and Gujarat Earthquake	T4-Ch.8; pg.111-112	PPT/ BB/Online
39	Cases Studies: Orissa Super-cyclone and South India Tsunami	T4-Ch.8; pg.112-114	PPT/ BB/Online
40	Cases Studies: Bihar floods and Plague Surat	T4-Ch.8; pg.114-116	PPT/ BB/Online
41	Cases Studies: Landslide in North East,	T4-Ch.3; pg.70	PPT/ BB/Online
42	Cases Studies: Heat waves of AP & Orissa, Cold waves in UP. Bengal famine	T4-Ch.3; pg.60	PPT/ BB/Online
43	Best practices in disaster management	T4-Ch.4; pg.92	PPT/ BB/Online
44	Local Knowledge Appropriate Technology and local Responses	T4-Ch.11; pg.146	PPT/ BB/Online
45	Development projects in India (dams, SEZ) and their impacts	T4-Ch.3; pg.64	PPT/ BB/Online

**Content beyond syllabus covered (if any): Importance of microprocessors in control system studies**

\* Session duration: 50 mins





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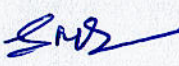
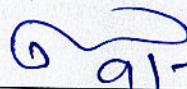
**TEXT BOOKS:**

1. Singhal J.P. "Disaster Management", Laxmi Publications, 2010. ISBN-10: 9380386427 ISBN-13: 978-9380386423
2. Disaster Management by Dr. Mrinalini Pandey, Published by Wiley India, 2014 ISBN 10:8126549246/ISBN 13:9788126549245

**REFERENCES:**

1. Govt. of India: Disaster Management Act, Government of India, New Delhi, 2005.
2. Government of India, National Disaster Management Policy, 2009.
3. National Disaster Management Plan, Ministry of Home affairs, Government of India (<http://www.ndma.gov.in/images/policyplan/dmplan/draftndmp.pdf>).
4. Tushar Bhattacharya, "Disaster Science and Management", McGraw Hill India Education Pvt. Ltd., 2012. ISBN-10:1259007367, ISBN-13:978-1259007361]
5. Natural Hazards and Disaster Management: Vulnerability and Mitigation, R.B. Singh, ISBN: 8131600335, 2006.
6. Carter, N.W. Disaster Management: A Disaster Manager's Handbook, Asian Development Bank, Manila. 1992

\* If the same lesson plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD

	Prepared by	Approved by
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Date	09/07/24	09/07/24
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