

Techno India NJR Institute of Technology



Course File

DISASTER MANAGEMENT (5CE5-12)

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For Techno India NJR Institute of Technology
पंकज पोरवाल
Dr. Pankaj Kumar Porwal
(Principal)



RAJASTHAN TECHNICAL UNIVERSITY, KOTA

Syllabus

3rd Year - V Semester: B.Tech. (Civil Engineering)

5CE5-12: DISASTER MANAGEMENT

Credit: 2
2L+0T+0P

Max. Marks: 100(IA:20, ETE:80)
End Term Exam: 2 Hours

SN	Contents	Hours
1	Introduction: Objective, scope and outcome of the course.	1
2	Introduction: Understanding the Concepts and definitions of Disaster, Hazard, Vulnerability, Risk, Natural and Manmade Disasters, Disaster and Development, and Climate Change.	2
3	Types of Disasters, their occurrence/ causes, impact and preventive measures:	4
	Geological Disasters: earthquakes, landslides, tsunami, mining;	
	Hydro-Meteorological Disasters: floods, cyclones, lightning, thunder-storms, hail storms, avalanches, droughts, cold and heat waves.	3
	Biological Disasters: epidemics, pest attacks, forest fire.;	3
	Technological Disasters: chemical, industrial, radiological, nuclear.	3
	Manmade Disasters: building collapse, rural and urban fire, road and rail accidents.	2
	Disaster profile of Indian continent, Mega Disasters of India and Lessons Learnt. Risk mapping.	3
4	Disaster Management Cycle: Disaster Management Cycle and its components: Pre disaster and post disaster, Paradigm Shift in Disaster Management. Safety tips for various types of disasters.	3
5	Disaster management system in India: Disaster Management Act 2005, National Guidelines and Plans on Disaster Management; Role of Government (local, state and national), Non-Government and Inter-Governmental Agencies.	4
	TOTAL	28

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Course Overview:

The course is intended to provide a general concept in the dimensions of disasters caused by nature beyond the human control as well as the disasters and environmental hazards induced by human activities with emphasis on disaster preparedness, response and recovery.

The course focuses on natural disasters the problem is addressed in a holistic cross-sectoral and cross-disciplinary manner, including all stages of disaster management cycle: mitigation, preparation, response and recovery. Starting with theory, main definitions and concepts, the course considers other aspects of Disaster Management cycle along with Local National & State policies, to counter disaster, as per act of 2005.

COURSE OUTCOMES HERE (4 OUTCOMES)

At the end of this course students will be able to:

CO1: To differentiate what are disasters, how to approach the vulnerability and risk involved.

CO2: To understand how the disasters are being categorized, depending on the conditions under which disaster happened.

CO3: Pre & post disaster measures, and how to ensure safety.

CO4: Local National & State policies, to counter disaster, as per act of 2005.

Disaster Management															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO482.1	3	1	2	1	1	2	2	1	1	1	1	1	1	2	3
CO482.2	3	2	2	1	1	1	1	1	1	1	1	2	1	2	2
CO482.3	3	1	2	1	1	2	2	1	1	1	1	1	1	2	3
CO481 (AVG)	3	1.33333	2	1	1	1.66667	1.66667	1	1	1	1	1.33333	1	2	2.66667

Lecture No	Topic	Comments
1	Introduction: Objective, scope and outcome of the course.	
2	Introduction: Understanding the Concepts and definitions of Disaster, Hazard, Vulnerability, Risk,	
3	Natural and Manmade Disasters, Disaster and Development, and Climate Change.	

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4	Geological Disasters: earthquakes	
5	Geological Disasters: landslides	
6	Geological Disasters: tsunami	
7	Geological Disasters: mining.	
8	Hydro-Meteorological Disasters: floods, cyclones, lightning	
9	Hydro-Meteorological Disasters: hail storms, avalanches	
10	Hydro-Meteorological Disasters: droughts, cold and heat waves.	
11	Biological Disasters: epidemics	
12	Biological Disasters: pest attacks	
13	Biological Disasters: forest fire	
14	Technological Disasters: chemical	
15	Technological Disasters: industrial	
16	Technological Disasters: radiological, nuclear.	
17	Manmade Disasters: building collapse, rural and urban fire	
18	Manmade Disasters: road and rail accidents.	
19	Disaster profile of Indian continent, Mega Disasters of India and Lessons Learnt.	
20	Disaster profile of Indian continent, Mega Disasters of India and Lessons Learnt. 2	
21	Risk mapping.	
22	Disaster Management Cycle: Disaster Management Cycle and its components: Pre disaster and post disaster.	
23	Paradigm Shift in Disaster Management.	
24	Safety tips for various types of disasters.	
25	Disaster management system in India: Disaster Management Act 2005,	
26	National Guidelines and Plans on Disaster Management; Role of Government (local, state and national)	
27	Non-Government and Inter-Governmental Agencies.	
28	Review	

Reference Books:

1. “Natural Hazards and Disaster Management: Vulnerability and Mitigation” by R B Singh
2. “Disaster Education and Management” by Rajendra Kumar Bhandari

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3. “Disaster Management” by R. Subramanian

4. Disaster Management act 2005

<https://cdn.s3waas.gov.in/s365658fde58ab3c2b6e5132a39fae7cb9/uploads/2018/04/2018041720.pdf>

NPTEL Courses:

1. [NPTEL :: Architecture - NOC:Disaster Recovery And Build Back Better](#)

2. [NPTEL :: Civil Engineering - Non-natural Hazards - Part-1](#)

Assessment Methodology:

1. Mid-term examination

2. Final exams conducted by the university.

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