

## DISASTER MANAGEMENT AND PREPAREDNESS

<b>Course Code</b>	20CE2701A	<b>Year</b>	IV	<b>Semester</b>	I
<b>Course Category</b>	Open Elective	<b>Branch</b>	IT/ME/EE E/ECE/ CE	<b>Course Type</b>	Theory
<b>Credits</b>	3	<b>L – T – P</b>	3-0-0	<b>Prerequisites</b>	20MC1301 – Environmental Science
<b>Continuous Evaluation:</b>	30	<b>Semester End Evaluation:</b>	70	<b>Total Marks:</b>	100

### Course Outcomes

Upon successful completion of the course, the student will be able to:		
<b>CO1</b>	<b>Demonstrate</b> basic terminology and <b>classify</b> types of disasters	L3
<b>CO2</b>	<b>Outline</b> the impacts of disaster	L2
<b>CO3</b>	<b>Familiarize</b> Disaster management activities and phases	L2
<b>CO4</b>	<b>Explain</b> the Components of disaster relief, disaster management policies	L3
<b>CO5</b>	<b>Develop</b> the responsibilities towards society after disaster	L3

### Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>CO1</b>	2	2					2			2				2
<b>CO2</b>	2	2					2			2				2
<b>CO3</b>	3	3					2			2				2
<b>CO4</b>	2	2					2			2				2
<b>CO5</b>	2	2					2			2				2
<b>Avg.</b>	<b>2</b>	<b>2</b>					<b>2</b>			<b>2</b>				<b>2</b>

## Syllabus

Unit No.	CONTENTS	Mapped CO
<b>I</b>	<b>INTRODUCTION &amp; DISASTERS CLASSIFICATION</b> Concepts and definitions: disaster, hazard, vulnerability, resilience, risks severity, frequency and details, capacity, impact, prevention, mitigation. Disasters classification; natural disasters (floods, draught, cyclones, volcanoes, earthquakes, tsunami, landslides, forest fires.); manmade disasters (industrial pollution, nuclear radiation, chemical spills, terrorist strikes); hazard and vulnerability profile of India.	<b>CO1</b>
<b>II</b>	<b>DISASTER IMPACTS</b> Disaster impacts (environmental, physical, social, ecological, economical, political); health, psycho-social issues; demographic aspects (gender, age, special needs); hazard locations; global and national disaster trends; climate change and urban disasters	<b>CO2</b>

<b>III</b>	<b>DISASTER MITIGATION AND PREPAREDNESS</b> Disaster management cycle – its phases; prevention, mitigation, preparedness, relief and recovery; structural and non-structural measures; risk analysis, vulnerability and capacity assessment; early warning systems, Role of remote sensing and GIS in disaster management.	<b>CO3</b>
<b>IV</b>	<b>POST DISASTER RESPONSE</b> Emergency medical and public health services; Environmental post disaster response (water, sanitation, food safety, disease control, security, communications); reconstruction and rehabilitation; Roles and responsibilities of government, community, local institutions, role of agencies like NDMA, SDMA and other International agencies, organizational structure, role of insurance sector.	<b>CO4</b>
<b>V</b>	<b>DISASTERS - ENVIRONMENT AND DEVELOPMENT</b> Factors affecting vulnerability such as impact of developmental projects and environmental modifications (including of dams, land use changes, urbanization etc.), sustainable and environmental friendly recovery; reconstruction and development methods.	<b>CO5</b>

### Learning Resources

#### **Text Books**

1. R. B. Singh, Disaster Management, Rawat Publications, 2000
2. Pradeep Sahni, 2004, Disaster Risk Reduction in South Asia, Prentice Hall.
3. Singh B.K., 2008, Handbook of Disaster Management: Techniques & Guidelines, Rajat Publication.

#### **Reference Books**

1. Disaster Medical Systems Guidelines. Emergency Medical Services Authority, State of California, EMSA no.214, June 2003
2. Inter-Agency Standing Committee (IASC) (Feb. 2007). IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC

#### **E-Resources & other digital material**

1. <http://ndma.gov.in/> (Home page of National Disaster Management Authority)
2. <http://www.ndmindia.nic.in/> (National Disaster management in India, Ministry of Home Affairs).