



Integral University, Lucknow
Department of Environmental Science

Effective from Session:2023-2024																		
Course Code	I150106T/ES131		Title of the Course	Introduction to Natural Hazard and Disaster Management					L	2	T	1	P	0	C	3		
Year	1st		Semester	I					2	1	0	3						
Pre-Requisite	Basic science		Co-requisite	NIL														
Course Objectives	1. To impart basic knowledge of concept of Hazard, risk and vulnerability. 2. To understand types of hazards, its causes and impact. 3. Assessment of risk and vulnerability. 4. Acquiring knowledge about mitigation and preparedness to combat disaster. 5. To aware about role of government bodies in disaster management.																	
Course Outcomes																		
CO1	Gain basic knowledge of concept of Hazard, risk and vulnerability.																	
CO2	Acquired knowledge of hazards its impact.																	
CO3	Understand about Assessment of risk and vulnerability related to disaster.																	
CO4	Formulate, organize and assess disaster Risk reduction activities																	
CO5	Demonstrate and practice Disaster Management.																	
Unit No.	Title of the Unit	Content of Unit											Contact Hrs.	Mapped CO				
1	Concept of Disaster and Vulnerability	Hazard and disaster -Concept; risk and vulnerability; Types of hazards-Natural hazards: hydrological, atmospheric & geological hazards, Causes of Earthquake, floods, cyclone, tsunami, landslides, and drought.											10	CO1				
2	Impact of Disaster	Global and National Perspective. Disaster profile of India, Case studies from Disasters, Large Hydro projects and its risks-Uttarakhand Dsisaster-2013.											10	CO2 CO3				
3	Disaster Management	Component of Disaster Management-Preparedness and Mitigation, Phases of Disaster Management. Compensation and Insurance.											10	CO4 CO5				
4	Intervention of technologies	Application of geoinformatics in hazard, risk & vulnerability assessment. Early warning System; PTWS & IMD.											10	CO5				
5	Disaster Risk Reduction	Approaches to Disaster risk Reduction (DRR)- Role of public, education and media in DRR. Community Based DRR,International/National Humanitarian aid.											10	CO4				
6	Disaster Act. And Policies	National Acts and policies for mitigating Disasters (Disaster Management Act 2005, National Policy for Disaster Management-2009, Institutional Framework for disaster management (NDMA, SDMA, SDMA &NIDM).											10	CO5				
Reference Books:																		
1-Coppola D. P. 2007. Introduction to International Disaster Management. Butterworth Heinemann.																		
2-Cutter, S.L. 2012. Hazards Vulnerability and Environmental Justice. EarthScan, Routledge Press.																		
3-Keller, E. A. 2012. Introduction to Environmental Geology. Prentice Hall, Upper Saddle River, New Jersey.																		
4-Pine, J.C. 2009. Natural Hazards Analysis: Reducing the Impact of Disasters. CRC Press, Taylor and Francis Group.																		
5-Schneid, T.D. & Collins, L. 2001. Disaster Management and Preparedness. Lewis Publishers, New York, NY.																		
6-Smith, K. 2001. Environmental Hazards: Assessing Risk and Reducing Disaster. Routledge Press.																		
7-Wallace, J.M. & Hobbs, P.V. 1977. Atmospheric Science: An Introductory Survey. Academic Press, New York.																		
e-Learning Source:																		
https://www.researchgate.net/publication/323794760_Natural_Hazards_and_Disaster_Management																		
https://link.springer.com/article/10.1007/s11069-019-03677-2																		
https://ndmindia.mha.gov.in/images/public-awareness/Primer%20for%20Parliamentarians.pdf																		
SWAYAM MOOC, e-Skill India, Coursera, Udemy,NPTEL																		
Course Articulation Matrix: (Mapping of COs with POs and PSOs)																		
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5	PS O6
CO1						2	2		-	-	-	-	3	2	2	1	1	-
CO2			2			2			-	-	-	-	2	2	3	1	1	-
CO3			2			2			-	-	-	-	1	3	2	1	1	-
CO4		3				2			-	-	-	-	1	3	1	3	3	-
CO5		2	2			2	2		-	-	-	-	1	1	3	3	3	-

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Sign & Seal of HoD
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