



University of Kerala

Discipline	PHYSICS				
Course Code	UK4VACPHY202				
Course Title	DISASTER MANAGEMENT				
Type of Course	VAC				
Semester	IV				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	3	3 Hrs	-	-	3 Hrs
Pre-requisites					
Course Summary	<p>This course provides a comprehensive overview of various phases of disaster management. 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 environmental hazards induced by human activities with emphasis on disaster preparedness, response and recovery. Additionally, the course explores role of national and state level agencies in disaster mitigation and disaster reduction.</p> <p>Case studies of a few disasters happened in India and across the globe.</p>				

BOOKS FOR STUDY:

1. Introduction to disaster management, Satish Modh, Mcmillan Publishers, India Ltd ISBN 13: 978-0230-63979-9
2. DISASTER MANAGEMENT, Uday Singh, VIKAS || PUBLISHING HOUSE PVT LTD ISBN : 978-93-5338-045-8
(https://ddceutkal.ac.in/Syllabus/MCOM/Disaster_Management.pdf)
3. Natural disaster mitigation – a scientific and practical approach: Science Press, Beijing, 2009
4. Environmental health in emergencies and disasters: A practical guide, B.Wisner & J.Adams (Eds.), WHO, Geneva, 2002 ISBN 92-4 154541-0.

DETAILED SYLLABUS: THEORY

Module	Unit	Content	Hrs	CO No
I	Type of Natural disasters (Book 2:Chapter 1 & Book 1:Chapter 1)		9	
	1	Natural Disasters - Flood Drought, Cyclone,	2	1
	2	Geographical Disaster, Earthquake, Landslide	2	1
	3	Climatic Disaster- Heat and Cold Wave, Climate Change	3	1
	4	Lecture/Tutorial Session (Debate/group discussion on) i) Impacts of Global Warming - Sea level Rise, ii) Ozone Depletion and its impacts on other natural disasters (Group discussion)	2	1
II	Man Made Disaster (Book 2, Chapter 2 & Book 1:Chapter 1)		9	
	5	Nuclear Disaster, Chemical Disaster, Biological Disaster,	3	1,2
	6	Building Fire, Coal Fire, Oil Fire,	2	1,2
	7	Air Pollution, Water Pollution, Industrial Pollution, Deforestation	2	1,2
	8	Tutorial/Lecture - GroupWise presentation on Main Air & Sea Accidents in the last decade	2	1,2
III	Disaster Prevention and Control (Book 2, Chapter 3 & Book 1:Chapter 2)		9	
	9	Disaster preparedness, prevention and mitigation, Community based disaster management (CBDM) and its operation, Disaster Information, National Institute of Disaster Management	5	3
	10	Role of Various Agencies in Disaster Mitigation- National level and State levels - National Disaster Response Force (NDRF)	3	3
	11	Tutorial/Lecture - GroupWise presentation on “the role and awareness of of National and State level agencies”	1	3

	Risk assessment and management (Book 2, Chapter 3,4 & Book 1:Chapter 3,4)		9	
IV	12	Role of the UN, and international agencies in disaster management; United Nations Disaster Relief coordinator (UNDRO), UNDRO Mandate in Disaster Relief and Management, General Assembly, Guiding Principles, Prevention, Preparedness, Stand-By Capacity, Consolidated Appeals; Coordination, Cooperation And Leadership; Continuum From Relief To Rehabilitation And Development, Yokohama Conference, Kobe Conference, Plan of Action	3	4
	13	National disaster management in India - an overview National Policy, National Crisis Management Committee (NCCM), Crisis Management Group, Funding Mechanisms, The Disaster Management Act, 2005, The National Disaster Management Authority (NDMA), State Disaster Management Authorities, District Disaster Management Authority, Indian Agencies for Disaster Management, Indian Red Cross Society,	4	4
	14	Tutorial/Lecture Discussion on the role of various agencies in disaster management,	2	4
V*	Case Studies (Book 1, Chapter 3) Note: Tutor can use any available resources to impart knowledge on this topic		9	
	15	Disasters in India: Bhopal gas tragedy of 1984, Orissa cyclone 1999, Kerala Flood 2018	3	4,5
	16	Disasters across globe: Chernobyl nuclear accident 1986, Tsunami 2004, Brumadinho Dam, Brazil 2019	3	4,5
	17	Tutorial/Lecture Power point presentation and discussion on the various disasters and mitigation across globe and in our country	3	4,5

COURSE OUTCOMES

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO-1	Understand the need and significance of studying disaster management	U	PSO-1,2,3
CO-2	Gain knowledge on the impacts Disasters on environment and society	R, U	PSO -1,2,4
CO-3	Understand the types of disaster their origin causes and their management and the disaster profile of India	R, U	PSO -1,3,6,
CO-4	Learning to apply the knowledge of technology for monitoring and management of the Disaster	Ap	PSO-1,3,5,6
CO-5	Explain Emergencies and controls, with examples of natural and manmade disasters and their consequences.	R, Ap	PSO-2,4,5

R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create

Name of the Course: DISASTER MANAGEMENT

Credits: 3:0:0 (Lecture: Tutorial: Practical)

CO No.	CO	PO / PSO	Cognitive Level	Knowledge Category	Lecture (L)/ Tutorial (T)	Practical (P)
CO-1	Understand the need and significance of studying disaster management	PSO 1,2,3	U	F, C	L / T	-
CO-2	Gain knowledge on the impacts Disasters on environment and society	PSO 1,2,4	R, U	F, C	L / T	-
CO-3	Understand the types of disaster their origin	PSO 1,3,6	R, U	C	L / T	-

	causes and their management and the disaster profile of India					
CO-4	Learning to apply the knowledge of technology for monitoring and management of the Disaster	PSO 1,3,5,6	Ap	C	L / T	-
CO-5	Explain Emergencies and controls, with examples of natural and manmade disasters and their consequences.	PSO 2,4,5	R, Ap	C,P	L / T	-

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive

Mapping of COs with PSOs and POs :

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO-1	1	1	2	-	-	-	-	1	1	-	-	-	-	-	-
CO-2	1	1	-	2	-	-	-	1	2	-	-	-	-	-	-
CO-3	1	-	1	-	-	2	-	-	1	2	-	-	-	-	-
CO-4	1	-	1	-	2	2	-	-	-	1	1	1	-	-	-
CO-5	-	1	-	2	2	-	-	-	-	1	1	2	1	-	-
CO-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Correlation Levels:

Level	-	1	2	3
Correlation	Nil	Slightly / Low	Moderate / Medium	Substantial / High

Assessment Rubrics:

- Quiz / Assignment/ Discussion / Seminar
- Midterm Exam
- Programming Assignments
- Final Exam

Mapping of COs to Assessment Rubrics:

CO No	Internal Exam	Assignment	Project Evaluation	End Semester Examinations
CO-1	✓	-	-	✓
CO-2	✓	-	-	✓
CO-3	✓	✓	-	✓
CO-4	✓	✓	-	✓
CO-5	✓	✓	✓	-