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## General Handout for all courses appended to the time table

Course No. : 17HOE753	Dept.: CIVIL ENGINEERING
Course Title : NATURAL DISASTER MITIGATION AND MANAGEMENT	Semester: VII
Subject Coordinator: MR. SHARATH BABU K /MR. SANATH KUMAR K R	Academic Year: 2020-21

### SUBJECT DESCRIPTION:

This Course covers the fundamental principles of Disaster Mitigation and Management. The main topics covered are Earthquake, Flood, Tornadoes, Disaster monitoring and assessment, Information Dissemination and Risk Analysis.

### TEXT BOOKS:


- T1.** B.Narayan: “Disaster Management”, S.B.Nangia, A P H publishing corporation, Delhi-2014.
- T2.** Kovach, Robert L.: “Earth’s Fury: An Introduction to Natural Hazards and Disasters”, Englewood Cliffs, N.J., Prentice Hall, 1995.

### REFERENCE BOOKS:

- R1:** Benjamin C. Kuo, Farid Golnaaghi: “Automatic Control Systems”, 8th Edition, Wiley Student Edition, 2010, ISBN: 9788126513710.
- R2:** A K Jairath: “Problems and solutions of control systems with essential theory”, Reprint 5th Edition, CBS, New Delhi, 2009, ISBN: 978-81-239-1686-6.

### PREREQUISITES


<p>1 Basic knowledge of Disaster and its classification.</p> <p>2 Understanding about various organizations which are working on Disaster Management. ( Can be understood via news articles or case studies)</p>	<p>Self study/ Online/ Outsourced</p> <p>CASE STUDIES OR JOURNALS</p>	<p>Referral Document</p> <p>NDMA AND KSNDMC WEBSITE</p>	<p>Remarks</p>
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## LECTURE PLAN


Topic	Topic Details	Number of Lectures	Cumulative lecture hrs.	Unit/ Chapter Reference
Overview	Introduction- Natural Disasters around the world	1	10	Natural Disasters T1: Page No. 1-34
Unit 1	Natural Disaster Risk Assessment	1		
	Earth and its characteristics	1		
	Disaster Mitigation.	1		
	Disaster Preparedness	1		
	Vulnerable Populations, Logistics and Services	1		
	Food, Nutrition and Shelter	1		
	Role of UN Red cross and NGOs	1		
	Characteristics of a Disaster.	1		
Revision	Revision of module 1	1		
Unit 2	Introduction and review	1	10	Natural Hazards T1: Page No. 112-164
	Natural Disasters- Principles, Elements, and Systems	1		
	Geological-Geomorphological aspects	1		
	Earthquake- Geology, Seismology	1		
	Characteristics and dimensions-- Landslides	1		
	P waves and S waves	2		
	Liquefaction	1		
	Tsunami Nature and characteristics.	1		
Revision	Revision	1		
<b>ASSIGNMENT 1</b>				
Unit 3	Oceanic cycles.	1		Climate system aspects and Processes  T1: Page No.
	Severe Weather and Tornadoes.	1		
	Cyclones.	1		
	Floods and Droughts.	2		
	Global Patterns -Mitigation and	1		

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	Preparation.		10	166-182, 213
	Drought–Famine- nature and dimensions.	1		
	Drought Assessment and Monitoring.	2		
Revision	Revision	1		
Unit 4	Mapping – Modeling risk analysis and loss estimation	1		Natural Disaster Communication T1: Page No.69
Revision	Natural disaster risk analysis	1		
Assignment	Prevention and mitigation	1		
	Applications of Space Technology (Satellite Communication)	2	10	
	GPS, GIS and Remote Sensing Techniques	2		
	Disaster Monitoring and Support Centre	1		
	Information Dissemination	1		
Revision	Revision	1		
<b>ASSIGNMENT 2</b>				
Unit 5	Community and Social organizations	1		Administrative mechanisms T1: Page No.35-36
	Education and Training	1		
	Introduction to stake holders	1		
	Establishment of capacity building among various stake holders	2		
	Government-Educational institutions	1	10	
	Use of Multi-media knowledge products for self-education.	2		
	Use of Multi-media products	1		
Revision	Revision	1		
Future scope of learning				

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Evaluation Scheme:

Component	Duration	Weightage	Date (Time)
CIE 1	90 min	40%	30-SEP-2020
CIE 2	90 min	80%	09-NOV-2020
AIT 1	2 days		25-SEP-2020
AIT 2	2 days		05-NOV-2020
Make up CIE	90 min	100%	27-NOV-2020
SEE	180 min		
Make up SEE	180 min		
Total			

**MR.SHARATH BABU K / MR. SANATH KUMAR K R**  
**Course-in-charge**

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