

CEE11029	Disaster Management	L	T	P	C
Version 1.0	Contact Hours - 45	3	0	0	3
Pre-requisites/Exposure					
Co-requisites					

Course Objectives:

- To introduce students about disaster (natural or man-made both), their types, causes, effects on various sectors and some of the practical examples to aware students about it.
- To enhance the student to make them able to understand the risk scale and develop the strategies for Vulnerability.
- To prepare students about preparedness to response immediately and execute the plan for search, rescue operations, Logistic Management etc.
- To make students handling the post disaster situations, accordingly psychological and medical point of views.
- To get them brief idea that how the area will rehabilitated, the damage are reconstructed and recover the society and victims as well.

Course Outcomes:

On completion of this course, the students will be able to

CO1. Show various types of disasters, occurred naturally or mankind will be responsible. **CO2.** Analyze the Risk and Vulnerability; reduce it using different strategic developments.

CO3. Organize the response in emergency basis to the disaster, handle the situation efficiently, give psychological and medical supports to the victims; understand the role of various bodies to the incident.

CO4. Assess the damage, rehabilitate, reconstruct it, recover the victims and handle the post-disaster effects.

Course Description:

Disaster Management is introduced to combat the disaster and tried to minimize the losses by developing suitable plans and strategies. In present world, except the natural disasters, artificial disasters also occurred in the large scale which becomes more threatened to the mankind. Hence, as a responsible person, students need to not only aware about it but also know about the process of responding, execute the operations and handling the situation. As a student of Civil Engineering, one must know about the repair and rehabilitation techniques to recover the damaged structures. Classes will be conducted by lecture, practical examples as well as power point presentation. The tutorials will familiarize the students with practical problem-solving techniques led by the course coordinator. Students will strongly grab the basic concepts of the subject via exercise and discussions with the coordinator.

Course Content:

Units	Lecture Hours
Module-I: Introduction on Disaster: Different Types of Disaster: Natural Disaster: such as Flood, Cyclone, Earthquakes, Landslides etc., Man-made Disaster: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters, Accidents(Air, Sea, Rail & Road), Structural failures (Building and Bridge), War & Terrorism etc. Causes, effects and practical examples for all disasters.	10
Unit-II: Risk and Vulnerability Analysis: Risk and Vulnerability Analysis, Risk: Its concept and analysis, Risk Reduction, Vulnerability: Its concept and analysis, Strategic Development for Vulnerability.	10
Unit-III: Disaster Response: Introduction, Disaster Response Plan. Communication, Participation, and Activation of Emergency Preparedness Plan. Search, Rescue, Evacuation and Logistic Management, Role of Government, International and NGO Bodies, Psychological Response and Management(Trauma, Stress, Rumour and Panic), Relief and Recovery, MedicalHealth Response to Different Disasters.	13
Unit-IV: Rehabilitation, Reconstruction and Recovery: Reconstruction and Rehabilitation as a Means of Development, DamageAssessment, Post Disaster effects and Remedial Measures. Creation of Long- term Job Opportunities and Livelihood Options, Disaster Resistant House Construction, Sanitationand Hygiene, Education and Awareness, Dealing with Psychology, Long-term Counter Disaster Planning, Role of Educational Institute. Reference Books Dr. Mrinalini Pandey, Disaster Management, Wiley India Pvt. Ltd. Jagbir Singh, Disaster Management : Future Challenges and Opportunities, K W Publishers Pvt. Ltd. Shailesh Shukla, Shamna Hussain, Biodiversity, Environment and Disaster Management, Unique Publications. J. P. Singhal, Disaster Management, Laxmi Publications. C. K. Rajan, Navale Pandharinath, Earth and Atmospheric Disaster Management: Nature andManmade, B SPublication	12

Relationship between Course Outcomes (COs) and Program Outcomes (POs):

Course Code	Course Name	COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
CEE11 029	Disaster Management	CO110 29.1	3	3	2	2	2	2	1	-	2	-	-	3	2	1	1
CEE11 029	Disaster Management	CO110 29.2	3	3	2	2	2	3	3	-	1	-	-	3	2	2	1

		CO110 29.3	3	3	3	2	3	1	2	-	2	-	-	3	1	2	1
		CO110 29.4	3	3	2	3	2	3	1	-	3	-	-	3	1	1	1
		CO110 29	3.0	3.0	2.25	2.25	2.25	2.25	1.75	-	2.0	-	-	3.0	1.5	1.5	1.0