

**NIRMA UNIVERSITY**  
**Institute of Technology**  
**School of Engineering**  
**Bachelor of Technology - Civil Engineering**  
**Open Electives (all branches)**

L	T	P	C
3	0	0	3

<b>Course Code</b>	2CLOE26
<b>Course Name</b>	Disaster Management

**Course Outcomes:**

At the end of the course, students will be able to –

1. assess risk of a disaster and associated damages
2. develop a disaster management plan
3. appraise role of various stakeholders in disaster management
4. perceive disaster management policies.

**Syllabus**

**Teaching hours: 45**

**Unit 1: Introduction to Disaster Management (DM)**

**Hours: 06**

Importance & Significance, Types of Disasters, Climate Change, DM cycle.

**Unit 2: Risk Assessment**

**Hours: 12**

Risk, Vulnerability, Types of Risk, Risk identification, Emerging Risks, Risk Assessment, Damage Assessment, Risk modelling.

**Unit 3: Disaster Management**

**Hours: 12**

Phases, Cycle of Disaster Management, Institutional Framework, Incident Command System, DM Plan, Community Based DM, Community health and safety, Early Warning and Disaster Monitoring, Disaster Communication, Role of GIS and Remote Sensing, Do's and Don'ts in various disasters.

**Unit 4: Role of an Engineer**

**Hours: 07**

Challenges and solutions for DM, Disaster Safe Designs and Constructions, Structural and Non Structural Mitigation of Disasters.

**Unit 5: Disaster Management Policy & Practices**

**Hours: 08**

Disaster Management Act 2005, Disaster Management Policy, National Guidelines and Plans, Role of Government, Non-Government and Private Agencies.

**Self-Study:**

The self-study contents will be declared at the commencement of semester. Around 10% of the questions will be asked from self-study contents.

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**Suggested Readings:**

1. Modh, S., *Introduction to Disaster Management*, Macmillan.
2. Sinha, P.C., *Disaster Relief: Rehabilitation and Emergency Humanitarian Assistance*, SBS Publishers.
3. Piers B, Cannon T., Davis I., & Ben W., *At Risk: Natural hazards, People's Vulnerability and Disasters*, Routledge.
4. Singh R.B. (Ed.), *Natural Hazards and Disaster Management Vulnerability Mitigation*, Rawat Publications.
5. Robert B., & Edwards K., *Natural Hazards: Earth's processes as hazards disasters and catastrophe*, Pearson Prentice Hall.

L= Lecture, T= Tutorial, P= Practical, C= Credit

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w.e.f. academic year 2020-21 and onwards