

NIRMA UNIVERSITY
Institute of Technology
School of Engineering
Bachelor of Technology - Civil Engineering
Semester- V/VI/VII

L	T	P	C
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Course Code	2CLOEXX
Course Name	Disaster Management

Course Outcomes:

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

1. identify and assess risk of a disaster and associated damages
2. plan and execute activities for disaster management
3. appraise policies and role of various stakeholders in disaster management.

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.

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

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