



THIRD-YEAR DIPLOMA CIVIL ENGINEERING SYLLABUS

Semester: 6th

Course Code: 002298601

Type of Course: OEC-2

Course Name: Disaster Management

Course Prerequisites:

Before taking this course "Ground Water Engineering", it is expected that students have already learned some basic concepts of ground water and Water Resources Engineering course in the fourth semester.

COURSE OBJECTIVE(S):

This course is design to help the student to attain the following competency through various teaching learning experiences: To learn about various types of natural and man-made disasters. To know pre- and post-disaster management for some of the Disasters. To know about various information and organisations in disaster management in India. To get exposed to technological tools and their role in disaster management.

TEACHING& EXAMINATION SCHEME:

Teaching Scheme (Hrs/Week)				Examination Scheme					
Theory	Tutorial	Practical	Credit	SEE		CA			Total
				Th	Pr	MSE	PLE	LA	
03	00	00	03	60	00	20	20	00	100

SEE: Semester End Examination; CA: Continuous Assessment; Th: Theory; Pr: Practical; MSE: Mid Semester Examination; PLE: Participatory Learning Experience; LA: Laboratory Assessment

TOTAL Theory Hours: No. of Th. and Tut. Hrs/Week*15 = 45

COURSE CONTENT(S):

Unit No.	Content	Hours	Weightage (%)
1	UNIT-I-UNDERSTANDING DISASTER Understanding the Concepts and definitions of Disaster, Hazard, Vulnerability, Risk, Capacity, Disaster and Development, and disaster management.	07	15%
2	UNIT-II-TYPES, TRENDS, CAUSES, CONSEQUENCES AND CONTROL OF DISASTERS Geological Disasters (earthquakes, landslides, tsunami, mining); Hydro-Meteorological Disasters (floods, cyclones, lightning, thunder-storms, hail storms, avalanches, droughts, cold and heat waves) Biological Disasters (epidemics, pest attacks, forest fire); Technological Disasters (chemical, industrial, radiological, nuclear) and Manmade Disasters (building collapse, rural and urban fire, road and rail accidents, nuclear, radiological, chemicals and biological disasters) Global Disaster Trends, Emerging Risks of Disasters, Climate Change and Urban Disasters.	10	22%
3	UNIT-III-DISASTER MANAGEMENT CYCLE AND FRAMEWORK Disaster Management Cycle - Paradigm Shift in Disaster	12	27%



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	<p>Management. Pre-Disaster - Risk Assessment and Analysis, Risk Mapping, zonation and Microzonation, Prevention and Mitigation of Disasters, Early Warning System; Preparedness, Capacity Development; Awareness. During Disaster - Evacuation - Disaster Communication - Search and Rescue - Emergency Operation Centre - Incident Command System - Relief and Rehabilitation. Post-disaster - Damage and Needs Assessment, Restoration of Critical Infrastructure - Early Recovery - Reconstruction and Redevelopment; IDNDR, Yokohama Strategy, Hyogo Framework of Action.</p>		
4	<p>UNIT-IV DISASTER MANAGEMENT IN INDIA Disaster Profile of India - Mega Disasters of India and Lessons Learnt. Disaster Management Act 2005 - Institutional and Financial Mechanism, National Policy on Disaster Management, National Guidelines and Plans on Disaster Management; Role of Government (local, state and national), Non-Government and Inter Governmental Agencies.</p>	08	18%
5	<p>UNIT-V APPLICATIONS OF SCIENCE AND TECHNOLOGY FOR DISASTER MANAGEMENT Geo-informatics in Disaster Management (RS, GIS, GPS and RS). Disaster Communication System (Early Warning and Its Dissemination). Land Use Planning and Development Regulations, Disaster Safe Designs and Constructions, Structural and Non Structural Mitigation of Disasters, S&T Institutions for Disaster Management in India.</p>	08	18%
TOTAL		45	100%

Text Book(s):

Title of the Book	Author(s)	Publication
Disaster Management	Dr.R.P. Rethaliya	AtulPrakashan

Reference Book(s):

Title of the Book	Author(s)	Publication
Disaster Management	Ghosh, G. K	A P H Publishing Corporation
Natural Disasters,	Alexander, David	Kluwer Academic London
, Disaster Management: Text & Case Studies	. Murthy, D. B. N	Deep & Deep Pvt. Ltd.
Management of Natural Disasters in developing countries	Srivastava, H. N., and Gupta G. D	Daya Publishers, Delhi

Web Material Link(s): Nil

Equivalent/Corresponding Course on NPTEL (SWAYAM): Nil



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COURSE EVALUATION:

Sr. No.	Activity	Marks	Weightage
1	Semester End Examination (External Th)	60	60%
2	Internal Examination	40	40%
2(a)	Mid Semester Examination	20	
2(b)	Attendance	10	
2(c)	Assessment Types (Any One from 2(c).1 to 2(c).7)	10	
2(c).1	Subject (Course) based Mini-Project		
2(c).2	Industry/Site Visit & Report		
2(c).3	Assignment		
2(c).4	Seminar		
2(c).5	Case Study		
2(c).6	Surprise Class Quiz		
2(c).7	Design Exercise		
2(c).7	Presentation		
2(d)	Practical (if Applicable)		

* For 4 Credit Subjects

1 Credit = 25 Marks

Theory: 3 Credits = 75 Marks

Practicals: 1 Credit = 25 Marks

SEE Evaluation will be of 100 marks and converted to 50 Marks (75 Th + 25 Pr)

CA Evaluation will be of 100 Marks and converted to 50 Marks. (75 Th + 25 Pr)

Distribution of Marks for Theory Evaluation as per Bloom's Taxonomy Level:

Level	Remember	Understand	Apply	Analyse	Evaluate	Create
% Weightage	30%	25%	25%	15%	05%	00%

COURSE OUTCOMES:

CO-1	Acquainted with basic information on various types of disasters.
CO-2	Knowing the precautions and awareness regarding various disasters.
CO-3	Decide first action to be taken under various disasters.
CO-4	Familiarised with organisation in India which are dealing with disasters.
CO-5	Able to select IT tools to help in disaster management.