



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

MASTER OF BUSINESS ADMINISTRATION

COURSE DESCRIPTOR

Course Title	DISASTER MANGEMENT				
Course Code	CMBB24				
Programme	MBA				
Semester	II				
Course Type	Foundation				
Regulation	IARE - R18				
Course Structure	Theory			Practical	
	Lectures	Tutorials	Credits	Laboratory	Credits
	4	-	4	-	-
Chief Coordinator	Ms.K.L.Revathi, Assistant Professor				
Course Faculty	Mr. K.L.Revathi , Assistant Professor				

I. COURSE OVERVIEW:

Environmental Hazards and Disasters, Meaning of Environmental hazards, Environmental Disasters and Environmental stress. Concept of Environmental Hazards, Environmental stress and Environmental Disasters. Different approaches and relation with human Ecology, Landscape Approach, Ecosystem Approach, Hazardous effects of earthquakes . Earthquake Hazards in India Human adjustment, perception and mitigation of earthquake. Emerging approaches in Disaster Management.

II. COURSE PRE-REQUISITES:

Level	Course Code	Semester	Prerequisites
-	-	-	-

III. MARKS DISTRIBUTION:

Subject	SEE Examination	CIA Examination	Total Marks
DISASTER MANGEMENT	70 Marks	30 Marks	100

IV. DELIVERY / INSTRUCTIONAL METHODOLOGIES:

✓	Chalk & Talk	✓	Quiz	✓	Assignments	✗	MOOCs
✓	LCD / PPT	✓	Seminars	✗	Mini Project	✓	Videos
✗	Open Ended Experiments						

V. EVALUATION METHODOLOGY:

The course will be evaluated for a total of 100 marks, with 30 marks for Continuous Internal Assessment (CIA) and 70 marks for Semester End Examination (SEE). Out of 30 marks allotted for CIA during the semester, marks are awarded by taking average of two CIA examinations or the marks scored in the make-up examination.

Semester End Examination (SEE): The SEE is conducted for 70 marks of 3 hours duration. The syllabus for the theory courses is divided into five modules and each module carries equal weight age in terms of marks distribution. The question paper pattern is as follows. Two full questions with “either” or “choice” will be drawn from each module. Each question carries 14 marks. There could be a maximum of two sub divisions in a question.

The emphasis on the questions is broadly based on the following criteria:

50 %	To test the objectiveness of the concept.
50 %	To test the analytical skill of the concept OR to test the application skill of the concept.

Continuous Internal Assessment (CIA):

CIA is conducted for a total of 30 marks (Table 1), with 20 marks for Continuous Internal Examination (CIE), 05 marks for Quiz and 05 marks for Alternative Assessment Tool (AAT).

Table 1: Assessment pattern for CIA

Component	Theory			Total Marks
Type of Assessment	CIE Exam	Quiz	AAT	
CIA Marks	20	05	05	30

Continuous Internal Examination (CIE):

Two CIE exams shall be conducted at the end of the 8th and 16th week of the semester respectively. The CIE exam is conducted for 20 marks of 2 hours duration consisting of five descriptive type questions out of which four questions have to be answered where, each question carries 5 marks. Marks are awarded by taking average of marks scored in two CIE exams.

Alternative Assessment Tool (AAT)

This AAT enables faculty to design own assessment patterns during the CIA. The AAT converts the classroom into an effective learning centre. The AAT may include tutorial hours/classes, seminars, assignments, term paper, open ended experiments, METE (Modeling and Experimental Tools in Engineering), five minutes video, MOOCs etc.

The AAT chosen for this course is given in section XI.

VI. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes (POs)		Strength	Proficiency assessed by
PO 1	Managerial Skills: Apply knowledge of management theories and practices to solve business problems.	1	Lectures
PO 2	Decision making skills: An ability to analyze a problem identifies, formulate and use the appropriate managerial skills for obtaining its solution.	1	Lectures
PO 3	Ethics: Ability to develop value based leadership ability.	2	Assignments
PO 5	Leadership skills: Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.	3	Lectures

3 = High; 2 = Medium; 1 = Low

VII. COURSE OBJECTIVES:

The course should enable the students to:	
I	Identify the major disaster types and their environmental impacts. Develop an understanding of why and how the modern disaster management is involved with Pre-disaster and post-disaster activities.
II	Know the key personnel or specialists related to disaster management and associate them with the types of disasters and phases in which they are useful.
III	Recognize and develop awareness of the chronological phases of natural disaster response and refugee relief operations.

VIII. COURSE OUTCOMES (COs):

CO Code	CO's	At the end of the course, the student will have the ability to:	PO's Mapped	Strength of Mapping
CMBB24.01	CO1	Understand the meaning and concept of environmental hazard ED and ES.	PO1	1
CMBB24.02	CO2	Discuss different approaches and relation with human ecology land scope approach, ecosystem approach, and perception approach.	PO2	1
CMBB24.03	CO3	Explain natural and man-indexed hazards and disasters.	PO1	1
CMBB24.04	CO4	Interpret different types of planetary hazards and disaster.	PO3	2
CMBB24.05	CO5	Describe the distribution of volcanoes causes and effects of volcanic eruption and also environmental impacts of volcanic eruption.	PO2	1
CMBB24.06	CO6	Identify the causes and hazards effects of earthquakes and distribution of earthquakes.	PO3	2
CMBB24.07	CO7	Demonstrate of human adjustment perception and mitigation of earthquake.	PO5	3
CMBB24.08	CO8	Learn about harmful effects of Infrequent events: Cyclones, Lightning, Hailstorms, and Cyclones.	PO2	1
CMBB24.09	CO9	Understand Emergency Stage importance and Post Disaster stage- Rehabilitation phase	PO5	3
CMBB24.10	CO10	Explain the Biological hazards/ disasters: Population Explosion.	PO5	3

3 = High; 2 = Medium; 1 = Low

IX. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Outcomes (COs)	Program Outcomes (POs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	1											
CO 2	1											
CO 3	1											
CO 4			2									
CO 5		1										
CO 6			2									
CO 7					3							
CO 8		1										
CO 9					3							
CO 10					3							

3 = High; 2 = Medium; 1 = Low

X. ASSESSMENT METHODOLOGIES – DIRECT

CIE Exams	PO 1, PO 2 PO 3, PO 5	SEE Exams	PO 1, PO 2 PO 3, PO 5	Assignments	PO 1, PO 2 PO 3, PO 5	Seminars	PO 1, PO 2 PO 3, PO 5
Laboratory Practices	-	Student Viva	-	Mini Project	-	Certification	-
Term Paper	-						

XI. ASSESSMENT METHODOLOGIES – INDIRECT

✓	Early Semester Feedback	✓	End Semester OBE Feedback
✗	Assessment of Mini Projects by Experts		

XII. SYLLABUS

UNIT- I	ENVIRONMENTAL HAZARDS & DISASTERS
Meaning of Environmental hazards, Environmental Disasters and Environmental stress. Concept of Environmental Hazards Environmental stress and Environmental Disasters Different approaches and relation with human Ecology, Landscape Approach, Ecosystem Approach, Perception approach, Human Ecology and its application in geographical researches.	
UNIT – II	TYPES OF ENVIRONMENTAL HAZARDS & DISASTERS

Natural hazards and Disasters, Man indexed hazards and Disasters, Natural Hazards, Planetary Hazards / Disasters, Extra Planetary Hazards / disasters, Planetary Hazards, Endogenous Hazards, Exogenous Hazards.	
UNIT – III	ENDOGENOUS HAZARDS
Endogenous Hazards , volcanic eruption, Earthquakes, landslides, Volcanic Hazards / Disasters, Causes and distribution of volcanoes, hazardous effects of volcanic eruptions, Environmental impacts of volcanic eruptions. Earthquake Hazards / disasters, Causes of Earthquakes ,Distribution of earthquakes , Hazardous effects of earthquakes, Earthquake Hazards in India, Human adjustment, perception and mitigation of Earthquake.	
UNIT – IV	EXOGENOUS HAZARDS/ DISASTERS
Exogenous hazards / disasters, Infrequent events, Cumulative atmospheric hazards / disasters Infrequent events: Cyclones, Lightning, Hailstorms; Cyclones: Tropical cyclones and Local storms, Destruction by tropical cyclones and local storms (causes, distribution human adjustment, perception and mitigation) Cumulative atmospheric hazards/ disasters :- Floods, Droughts, Cold waves, Heal waves Floods :- Causes of floods, Flood hazards India, Flood control measures (Human adjustment, perception and mitigation) Droughts :- Impacts of droughts, drought hazards in India, Drought control measures, Extra Planetary Hazards / Disasters - man induced Hazards / Disasters - Physical hazards / Disasters - Soil erosion; Soil Erosion: Mechanics and forms of Soil Erosion, Factors 7 causes of Soil Erosion, Conservation measures of Soil Erosion; Chemical hazards / disasters: Release of toxic chemicals, nuclear explosion, Sedimentation processes Sedimentation processes: Global Sedimentation problems, Regional Sedimentation problems, Sedimentation and Environmental problems, Corrective measures of Erosion and Sedimentation.	
UNIT-V	EMERGING APPROACHES IN DISASTER MANAGEMENT
Emerging approaches in Disaster Management - Three stages 1. Pre-disaster Stage (preparedness) 2. Emergency Stage 3. Post Disaster stage – Rehabilitation	
Text Books:	
1. Donald Hyndman and David Hyndman, “Natural Hazards and Disasters”, Cengage Learning, 5th Edition, 2016. 2. R. B. Singh, “Environmental Geography”, Heritage Publishers, 2nd Edition, 1990.	
Reference Books:	
1. R.B.Singh (Ed) Environmental Geography, Heritage Publishers New Delhi,1990 2. Savinder Singh Environmental Geography, Prayag Pustak Bhawan, 1997 3. Kates,B.I & White, G.F The Environment as Hazards, oxford, New York, 1978 4. R.B. Singh (Ed) Disaster Management, Rawat Publication, New Delhi, 2000	

XIII. COURSE PLAN:

The course plan is meant as a guideline. Probably there may be changes.

Lecture No	Topics to be covered	Course Outcomes (COs)	Reference
1-3	Environmental Hazards &Disasters	CO1	T1,T2
4-5	Cumulative atmospheric hazards/ disasters.	CO1	T2, R1,R2
6-7	Landscape Approach - Ecosystem Approach - Perception approach.	CO2	T3, R1,R2
8-9	Perception approach, Human Ecology and its application in geographical researches.	CO2	T1, R1,R4
10-11	Environmental stress & Environmental Disasters	CO3	T1,T3
12-13	Endogenous Hazards	CO3	T2, R1,R3
14-16	Landscape Approach - Ecosystem Approach - Perception approach -	CO4	T2, R1,R4
17-19	Human ecology & its application in geographical researches.	CO4	T3, , R1,R2

Lecture No	Topics to be covered	Course Outcomes (COs)	Reference
20-22	Environmental Hazards & Disasters.	CO5	T1, R1,R2
22-24	Environmental hazards, Environmental Disasters.	CO5	T2, R3,R4
25-26	Cumulative atmospheric hazards, Environmental stress.	CO6	T3, R1,R2
27-29	Concept of Environmental Hazards.	CO6	T3,T2,R2
30-32	Environmental stress & Environmental Disasters.	CO7	T2, R1,R2
33-35	Endogenous Hazards.	CO7	T1 ,T2
36-38	Landscape Approach - Ecosystem Approach - Perception approach.	CO8	T2 , R1,R2
39-42	Human ecology & its application in geographical researches.	CO9	T3, R1,R2
42-43	Types of Environmental hazards & Disasters.	CO1	T1 ,T2
45-48	Natural hazards and Disasters.	CO8	T1, R1,R2
49-52	Man induced hazards & Disasters.	CO6	T1 ,T2
53-56	Natural Hazards- Planetary Hazards/ Disasters.	CO7	T3, , R1,R2
57-60	Planetary Hazards- Endogenous Hazards - Exogenous Hazards.	CO9	T1 ,T2,R3

XIV. GAPS IN THE SYLLABUS - TO MEET INDUSTRY / PROFESSION REQUIREMENTS:

S No	Description	Proposed actions	Relevance with pos
1	Stronger coordination, cooperation and linkages among the sectors.	Seminars	PO 1, PO 2, PO 5
2	Improvements for institutional capacity.	Seminars	PO 1, PO 2, PO 3
3	Effective implementation to realize inclusiveness of all multi stakeholders.	Seminars / Guest Lectures	PO1, PO 3, PO5
4	Lacks of skills in risk assessment due to geological and climatology equipments.	Guest Lectures	PO2, PO 3, PO5

Prepared by:

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