COURSE TITLE: ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT

Semester	Course Type	Course Level	Course Code	Credits	Total Hours
4	VAC	100-199	KU4VACCOM102	3	45

Learning Approach (Hours/ Week)			Marks Distribution			Duration of ESE (Hours)
Lecture per week	Practical per week	Tutorial	CE	ESE	Total	
3	-	-	25	50	75	1.5 hrs

Course Description: This course introduces students to key environmental concepts, major ecological issues, and the legal framework for environmental protection in India. It highlights the impact of pollution, climate change, and industrial activities on the environment, along with the role of businesses in promoting sustainability. Students will also learn about disaster management, covering both natural and man-made hazards, and strategies for preparedness and mitigation

Course Outcomes:

CO No.	Expected Outcome	Learning Domains
1	Recall basic concepts of environment, pollution, and disaster management.	R
2	Understand the causes and impacts of environmental degradation and disasters on society and business.	U
3	Apply environmental laws, pollution control measures, and disaster response strategies in real-life scenarios.	A
4	Analyze the relationship between economic development, sustainability, and environmental ethics	E
5	Evaluate government policies, business practices, and technologies for environmental compliance and disaster resilience.	A
6	Design solutions for sustainable practices or local disaster management strategies through innovative or case-based learning.	C

****Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C)***

Mapping of Course Outcomes to PSO

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1		✓	✓		✓
CO2		✓	✓		✓

CO3	✓	✓	✓	✓	✓
CO4	✓	✓	✓	✓	✓
CO5	✓	✓	✓	✓	✓
CO6	✓	✓	✓	✓	✓

COURSE CONTENTS

Module	Unit	Content	Hours	Marks
I	**Environmental Studies and Legal Framework**		**10**	
	1	Environment: Definition and components – Atmosphere, Hydrosphere, Lithosphere, Biosphere		
	2	Importance and scope of environmental studies- Key environmental issues: deforestation, mining, water depletion		
	3	Overview of major environmental movements: Chipko & Silent Valley		
	4	Environmental Protection Act, 1986 – Basic provisions and business implications.		
	5	Environmental Impact Assessment (EIA) – Meaning and relevance		
	6	ESG and eco-labeling		
II	**Environmental Pollution and Industrial Compliance**		**11**	
	1	Pollution- Major types of pollution: air, water, soil – causes and effects		
	2	Global environmental challenges: Climate change, global warming, ozone depletion, acid rain		
	3	Industrial compliance: norms and penalties		
	4	Role of industries in compliance and social responsibility		
	5	Green tech, carbon credit, Blockchain (Brief mention)		
III		**Sustainability and Disaster Management**	**10**	
	1	Sustainable vs. Unsustainable development-		
	2	Environmental hazards and Disaster: Meaning, types: natural & man-made – meaning and example		
	3	Endogenous Hazards: volcanic eruption-Earth quakes-Landslides		
	4	Exogenous Hazards: infrequent events, cyclones-lightning-		

		hailstorms.		
	5	Cumulative atmospheric hazards/disasters: floods-Droughts-Heat waves- Extra planetary hazards/disasters.		
	6	Man induced hazards and disasters: physical hazards/disas-ter-soil erosion-chemical hazards/disaster.		
IV		**Disaster Management Phases and Community Preparedness**	**8**	
	1	Phases of disaster management: 1) pre-disaster stage(pre-paredness), Emergency stage, post disaster stage		
	2	Institutional framework of disaster management-disaster mitigation institutions.		
	3	Community involvement in disaster management- SDGs and community preparedness using digital tools		
	4	Education on disaster, role of media		
V		**Teacher Specific Module**	**6**	
		Suggested topics: • Climate Finance and Environmental Accounting • Waste-to-Wealth Start-up Models • Green Audit in Colleges • Case Study: Kerala Floods or Cyclone Amphan		

Recommended Reading:

1. *Environmental Science* – Cunningham, TMH
2. *Environmental Studies* – A.K. De, New Age International
3. *Environmental Management* – N.K. Oberoi, Excel Books
4. *Environmental Pollution Control Engineering* – C.S. Rao, New Age International
5. *Ecosystem Principles and Sustainable Agriculture* – Sithamparanathan, Scitech
6. *Disaster Management* – R.B. Singh, Rawat Publications
7. *Disaster Management* – H.K. Gupta, University Press

8. *An Overview of Natural and Man-Made Disasters and Their Reduction* – R.K. Bhandani, CSIR

Assessment Rubrics:

Evaluation Type	Marks
End Semester Evaluation	**50**
Continuous Evaluation	**25**
a) Test Paper	*5*
b) Test Paper	*5*
c) Assignment	*7.5*
d) Seminar/Viva/Article or Book Review	*7.5*
Total	**100**