ENVIRONMENTAL MANAGEMENT

Course Code	19ES5601A	Year	III	Semester	II
Course Category	Open Elective-II	Branch	Common to All	Course Type	Theory
Credits	3	L – T – P	3 – 0 – 0	Prerequisites	Nil
Continuous Internal Evaluation	30	Semester End Evaluation	70	Total Marks	100

Course Outcomes		Levels
Upon successful completion of the course, the student will be able to		
CO1	Understand environmental management principles in relation to sustainable development & Economic sustainability.	L2
CO2	Apply critically theoretical and conceptual issues relating to environmental.	L3
CO3	Analyze & undertake research that will allow to articulate in both oral and written form and for appraisal of contemporary environmental management decision making.	L4
CO4	Analyze & Employ project management processes and analytical tools to achieve a sustainable outcome to environmental problems. (L4)	L4
CO5	Apply knowledge to Prepare technical papers/briefings to communicate risk/solutions to stakeholders.	L3

	Contribution of Course Outcomes towards achievement of Program Outcomes Strength of correlations (3: High, 2: Moderate, 1: Low)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3					2	2							1
CO2	3					2	2							1
CO3	3					2	2							1
CO4	3					2	2							1
CO5	3					2	2				2			1

Syllabus		
Unit No	Contents	Mapped CO s
I	**The atmosphere and human activities:** structure and composition of the atmosphere, Atmospheric pollution and causes describe and explain the causes, with reference to London smog, acid rain, ozone layer depletion, greenhouse effect, and their impact on people and environment, managing atmospheric pollution by people, governments and individuals to reduce the global impacts, Case study New Delhi Smog.	CO1 CO2
II	**Water and its management:** Global water distribution state the distribution, Water quality and availability - water-rich and water-poor countries, Multipurpose dam projects –Impacts –case studies- chipko movement, Narmada bachavo andholan, Water pollution and its sources, managing pollution of fresh water -Case study-Ganga River, Water related diseases and Management.	CO1 CO2
III	**Energy and the environment:** Classify energy resources as non-renewable and renewable, Fossil fuel formation, Energy demands, Conservation and management of Non-renewable energy resources,	CO1 CO3

	Alternate energy sources to meet the present demand.	
IV	**Managing natural hazards:** Earthquakes and volcanoes Management - Case study, Earthquake management in California , Tropical cyclones-storms, hurricanes, typhoons-Case study Managing cyclone impact in Orissa, India , Flooding -Case study Flooding in Bangladesh, Drought - Case study Drought in the India.	CO1 CO4
V	**Techniques for investigation and examination:** Investigation skills-EIA, Methods for local investigations – EIA statement, Examination techniques-Policy framing- Odd and Even rule in Delhi. (Using Software)	CO1 CO5

Learning Recourse(s)

Text Book(s)

1. Agarwal, K.M., Sikdar, P.K., Deb., S.C (2005) A Text Book of Environment, Macmillan India Limited.
2. Sharma, R.D. (1976), Organizational Management, Light and Life Publishers, New Delhi.
3. Varma and Agarwal, Theory & practice of Management Forward Book Depot, New Delhi

Reference Book(s)

1. Kovntz, H and C. Danvel (1978): Essential of management, second edition, Tata Mc Graw Hill publishing company, New Delhi.
2. Erickson, P.A. (1977) Environmental Impact Assessment – Principles an3. Erickson, P.A. (1977)