

Details of Course:

S. No.	Contents
1	ENVIRONMENTAL STUDIES: ECOSYSTEMS, BIO-DIVERSITY & ITS CONSERVATION The Multidisciplinary Nature of Environmental Studies Definition, scope and importance of Environmental Studies. Biotic and abiotic component of environment, need for environmental awareness. Ecosystems: Concept of an ecosystem, structure and function of an ecosystem, producers, consumers and decomposers, energy flow in the ecosystem, ecological succession, food chains, food webs and ecological pyramids. Introduction, types, characteristic features, structures and function of different ecosystem Bio-diversity and its Conservation: Introduction to biodiversity —definition: genetic, species and ecosystem diversity, Bio-geographical classification of India, Value of biodiversity: Consumptive use, productive use, social, ethical, aesthetic and option values, Biodiversity at global, national and local levels, India as a mega-diversity nation, Hot-spots of biodiversity, Threats to biodiversity : Habitat loss, Poaching of wildlife, man-wildlife conflicts, rare endangered and threatened species(RET) endemic species of India, method of biodiversity conservation: In-situ and ex-situ conservation.
2	NATURAL RESOURCES: PROBLEMS & PROSPECTS Renewable and Non-renewable Natural Resources Concept and definition of Natural Resources and need for their management Forest resources: Use and over-exploitation, deforestation, case studies, timber extraction, mining, dams and their effects on forests and tribal people. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams—benefits and problems, Water conservation, rain water harvesting, watershed management. Mineral resources: Uses and exploitation, environmental effects of extracting and using mineral resources, case studies. Food resources: World food problems, changes caused by agriculture and over-grazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, Urban problems related to energy, case studies. Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
3	ENVIRONMENTAL POLLUTION CONTROL Environmental Pollution, Definition, types, causes, effects and control measures of (a) Air pollution, (b) Water pollution, (c) Soil pollution, (d) Marine pollution, (e) Noise pollution, (f) Thermal pollution. Nuclear hazards. Solid waste and its management: causes, effects and control measures of urban and industrial waste.
4	Disaster Management, Social Issues, Human Population and the Environment. Social Issues, Human Population and the Environment, Sustainable development, Climate change, global warming, acid rain, ozone layer depletion, Environmental ethics: Issues and possible solutions, Consumerism and waste products, Wasteland reclamation. Population growth, problems of urbanisation.

Suggested Books:

S. No.	Name of Books/Authors/Publisher
1	E. Barucha, Textbook of Environmental Studies for Undergraduate Courses, Universities Press (India) Pvt. Ltd.
2	S. Chawla, A Textbook of Environmental Studies, McGraw Hill Education Private Limited.

Teaching and Examination Scheme		Credit	Hours/Week			Exam Duration (Hrs.)		Relative Weights (%)				
Subject Code	Course Title		L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
FEC7	Introduction to Environmental Sciences	2	2	0	0	3	0	25	0	25	50	0
			1	0	2	3	2	15	15	30	40	0
			0	0	4	0	3	0	50	0	0	50