

Subject Code : 2CS1010206	Subject Title: Environmental Studies
Pre-requisite:	-

Course Objective:

This course aims to bring together the principles of different streams so as to solve contemporary environmental problems. To intends to inculcate the environmental values translating into pro-conservation actions.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
3	-	-	3	70	30	-	-	100

Subject Contents			
Sr. No	Topic	Total Hours	Weight (%)
1	Introduction of Environment Definition and Components of Environment, Relationship between the different components of Environment, Impact of technology on Environment, Environmental Degradation and Importance of Environmental issues in current scenario.	4	8
2	Ecology and Ecosystem Introduction: Ecology - Objectives and Classification, Concept of an ecosystem-structure and functions of ecosystem Components of ecosystem- Producers, Consumers, Decomposers Bio-Geo- Chemical Cycles- Hydrologic Cycle, Carbon cycle, Energy Flow in Ecosystem, Food Chains, Food webs, Ecological Pyramids Major Ecosystems: Forest Ecosystem, Grassland Ecosystem, Desert Ecosystem, Aquatic Ecosystem, Estuarine Ecosystem.	8	15
3	Natural Resources (a) Renewable and Nonrenewable resources, exploitation and conservation, Role of individual in conservation of natural resources. (b) Water resources: Water sources- Surface and Ground water Sources, Indian and Global scenario. (c) Land as a resource, social issues (d) Forest resources: Definition and Classification of Forests Ecological and Economic importance and benefits of forest, Indian scenario, Deforestation: causes and effects, remedial measures. (e) Energy resources: Conventional and Non-conventional sources of energy, Advantages and Limitations, Utilization, Exploitation and related Environmental problems.	7	20
4	Human Population and Environmental Degradation Population Growth, World and Indian scenario, Population and Environmental Degradation, Malthusian theory, Optimum theory, Population explosion – Causes, Effects and Control.	6	16

5	Environmental pollution Types of Environmental Pollution: (a) Water Pollution: Introduction – Water Quality Standards, Sources of Water Pollution: Industrial, Agricultural, Municipal; Classification of water pollutants, Effects of water pollutants, Eutrophication (b) Air Pollution: Composition of air, Structure of atmosphere, Ambient Air Quality Standards, Classification of air pollutants, Sources of common air pollutants like PM, SO ₂ , NO _x , Natural & Anthropogenic Sources, Effects of common air pollutants (c) Land Pollution: Land uses, Land degradation: causes, effects and control, soil erosion (d) Noise Pollution: Introduction, Sound and Noise, Noise measurements, Causes and Effects (e) Thermal Pollution: Causes and effects (f) Role of individual in the prevention of pollution	10	26
6	Global Environmental Issues and Legislation Global Environmental Issues: Climate Change, Global Warming and Green House Effect, Acid Rain, Depletion of Ozone layer. Environmental Acts: Water, land, air and forest. Environmental awareness and ethics.	7	15

Course Outcome:

On the successful completion of the course the students will be able:

- To acquire basic knowledge and understand about environment and its related recent problems.
- To identify different environmental issues faced by human beings.
- To create awareness amongst the society.

List of References:

1. Environmental Studies: R. Rajagopalan, Oxford University Press
2. Environmental Pollution: Causes, Effects & Control by K.C Agrawal
3. Environmental Sciences by Daniel B Botkin & Edward A Keller Publisher: John Wiley & Sons.
4. Environmental Studies by Dr. Suresh K Dhameja, Published by : S K Kataria & Sons New Delhi
5. Basics of Environmental Studies by Dr.N S Varandani, Publisher: LAP -Lambert Academic Publishing ,Germany
6. Textbook of Environmental Studies for Undergraduate Courses by Erach Bharucha Second edition, 2013 Publisher: Universities Press (India) Private Ltd, Hyderabad.
7. Environmental Studies by Anindita Basak, Publisher: Drling Kindersley(India) Pvt. Ltd Pearson
8. Textbook of Environmental Studies by Deeksha Dave & S S Kateva , Cengage Publishers.