

Subject Code: 2SC1000231	Subject Title: Environmental Science
COURSE TYPE: Elective Generic	

Course Objective:

This course will provide students with fundamental understanding of ecosystem and environment.

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
2	--	2	--	2	--	50	--	--	50

Unit	Content	Lectures	Weight (%)
1	Introduction to Environment and Environmental Studies: Definition and Components of Environment, Relationship between the different components of Environment, Man and Environment relationship, Impact of technology on Environment, Environmental Degradation, Multidisciplinary nature of the Environment studies, its scope and importance in the present day Education System Ecology and Ecosystems: 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.	15	50%
2	Human Population and Environment: Population Growth, World and Indian scenario, Population and Environmental Degradation, Malthusian theory, Optimum theory, Population explosion – Causes, Effects and Control. Urbanization: Urban population growth and Environmental problems Environmental pollution: Types of Environmental Pollution: 1) Water Pollution: Introduction – Water Quality Standards, Sources of Water Pollution: Industrial ,Agricultural, Municipal; Classification of water pollutants, Effects of water pollutants, Eutrophication 2)Air Pollution: Composition of air, Structure of atmosphere, Ambient Air Quality Standards, Classification of air pollutants, Sources of common air pollutants like PM, SO₂, NO_x, Natural & Anthropogenic Sources, Effects of	15	50%

	common air pollutants 3) Land Pollution: Land uses ,Land degradation: causes, effects and control, soil erosion 4) Noise Pollution: Introduction, Sound and Noise, Noise measurements, Causes and Effects 5) Thermal Pollution: Causes and effects Role of individual in the prevention of pollution		
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Learning Outcome:

Students by offering this course will get proper understanding of important aspects that affects environment and ecology

Reference book:

1. Textbook of Environmental Studies for Undergraduate Courses by Erach Bharucha Second edition, 2013 Publisher: Universities Press (India) Private Ltd, Hyderabad.
2. Basics of Environmental Studies by Prof Dr N S Varandani ,2013 Publisher: LAP -Lambert Academic Publishing , Germany
3. Environmental Studies by Anindita Basak ,2009 Publisher: Drling Kindersley(India)Pvt. Ltd Pearson
4. Textbook of Environmental Studies by Deeksha Dave & S S Kateva , Cengage Publishers.
5. Environmental Sciences by Daniel B Botkin & Edward A Keller Publisher: John Wiley & Sons.
6. Environmental Studies by R. Rajagopalan, Oxford University Press
7. Environmental Studies by Benny Joseph, TMH publishers
8. Environmental Studies by Dr. Suresh K Dhameja, 2007 Published by : S K Kataria & Sons New Delhi
9. Basics of Environmental Studies by U K Khare, 2011 Published by Tata McGraw Hill