



C. U. SHAH UNIVERSITY

FACULTY OF ARTS & HUMANITIES

DEPARTMENT OF ENVIRONMENTAL SCIENCE

COURSE: B.A. (ALL) SEMESTER: II

SUBJECT NAME: Environmental Science

SUBJECT CODE: 4AH02ENS1

Teaching & Evaluation Scheme:-

Teaching hours/week				Credit	Evaluation Scheme/semester								
Th	Tu	Pr	Total		Theory				Practical				Total Marks
					Sessional Exam		University Exam		Internal		University		
					Marks	Hrs	Marks	Hrs	Pr	TW			
3	0	0	3	3	30	1.5	70	3	--	--	--	100	

Objectives: -

The primary objective of this course is to make people aware of the importance of environment on health of every individual and the society as a whole.

Prerequisites:-

Basic understanding of concepts related to environment and awareness about the harmful effects of pollution are required to understand the concept better.

Course outline:-

Sr. No.	Course Contents	Hours
1	Introduction to Environment, Ecology and Ecosystem: Definition, scope and importance Need for public awareness. Definition and Inter-relationships amongst and between them Components of Environment, Relationship between different components Man-Environment relationship Impact of Technology on the environment Environmental Degradation:	05



C. U. SHAH UNIVERSITY

2	<p>Ecology & Ecosystems</p> <p>Introduction: Ecology- Objectives and Classification Concepts of an ecosystem- structure & function of ecosystem Components of ecosystem- Producers, Consumers, Decomposers Bio-Geo- Chemical Cycles- Hydrological Cycle, carbon cycle, Oxygen Cycle, Nitrogen Cycle, Sulfur Cycle Energy Flow in Ecosystem Food Chains: Grazing, Detritus, & Food webs Ecological Pyramids Major Ecosystems: Forest Ecosystem, Grassland Ecosystem, Desert Ecosystem, Aquatic Ecosystem, Estuarine Ecosystem</p>	05
3	<p>Natural Resources</p> <p>Renewable& Non-renewableResources: RenewableResources, Non-renewableResources, Destruction versus Conservation.</p> <p>Water Resources: Water Resources-Indian Scenario, Water Sources-Surface & Ground Water Sources, Uses & overuses of water resources, problems due to Overexploitation of Water Resources</p> <p>Forest Resources : Forest Resources - Indian Scenario , Importance of forests- Ecologically & Economically, Uses of forest products, Forest Types, Deforestations-Causes and effects, Forest Degradation in India</p> <p>Energy Resources : Energy Resources - Indian Scenario , Conventional Energy Sources & its problems, non-conventional energy sources-Advantages & its limitations , Problems due to Overexploitation of Energy Resources.</p>	10
4	<p>Environmental Pollution</p> <p>Types of Environmental Pollution</p> <p>Water Pollution: Introduction – Water Quality Standards, Sources of Water Pollution, Classification of water pollutants, Effects of water pollutants,Eutrophication.</p> <p>Air Pollution : Composition of air , Structure of atmosphere, Ambient Air Quality Standards, Classification of air pollutants, Sources of common air pollutants like SPM, SO₂,NO_x</p> <p>Land & Noise Pollution: Introduction- Lithosphere, Land Uses, Causes of land Degradation, Sources of Noise Pollution, and Effects of noise pollution Current Environmental Global Issues: Global Warming & Green Houses Effects, Acid Rain, Depletion of Ozone Layer.</p>	06
5	<p>Conservation of Environment</p> <p>The concepts of conservation and sustainable development, why to conserve, aims and objectives of conservation, policies of conservation, conservation of life support systems – soil, water, air, wildlife, forests.</p>	04



C. U. SHAH UNIVERSITY

Learning Outcomes:-

- The course provides knowledge regarding conservation of environment which is very crucial in the present day scenario.

Books Recommended:

1. 'Introduction to Environmental Engineering and Science', **Masters, G.M.**, *Prentice –Hall of India Pvt. Ltd.*
2. 'Environmental Science', **Nebel, B.J.**, *Prentice –Hall Inc.*
3. 'Ecology: The Link between the natural and social sciences', **Odum, E.P.**, *IBH Publishing Com., Delhi.*
4. 'Environmental Studies', **SnehalPopli**, *Mahajan Publication.*
5. 'Environmental Studies', **R. Rajagopalan**, *Oxford University Press.*
6. 'Environmental Pollution: Causes, Effects&Control', **K.CAgrawal.**

E-Resources:

1. en.wikipedia.org/wiki/Environmental_science
2. www.iisc.ernet.in/ug/environmentscience.htm
3. www.sciencedaily.com/gallery/earth_climate/environmental_science/
4. environment.nationalgeographic.co.in/