SILVER OAK UNIVERSITY

School of Technology, Design and Computer Application

Silver Oak College of Computer Application

Bachelor of Science Computer Science & Information Technology

Course Name: Environmental Science

Course Code: 3040003297

Semester: 4th

Prerequisite: Basic understanding of environmental concepts and their significance. Familiarity with the intersection of biology, geography, and chemistry.

Course Objective: Understand the scope, importance, and interdisciplinary nature of environmental science in addressing global challenges. Analyze the interconnections between Earth's systems: atmosphere, hydrosphere, lithosphere, and biosphere. Demonstrate an understanding of biogeochemical cycles and their significance in maintaining ecological balance.

Teaching Scheme:

Teaching Scheme				
L	T	P	Contact Hours	Credit
2	0	0	2	2

Contents:

Unit No.	Course Contents	Teaching Hours	% Weightage
1	**Ecosystems and Biodiversity** Ecosystem structure and function, Energy flow and trophic levels, Biogeochemical cycles (Carbon, Nitrogen, Water), Biodiversity and conservation	5	18
2	**Energy Resources and Environmental Impact:** Non-renewable and renewable energy sources, Advantages and limitations, Energy efficiency, Utilization, Exploitation of resources, Environmental implications of Non - conventional Energy Sources.	7	25
3	**Human Population and Environment:** Population Growth, World and Indian scenario, Population and Environmental Degradation, Population explosion – Causes, Effects and Control, Urbanization: Urban population growth and Environmental problems	8	28

4	**Basic Concept of Green building and Environmental conservation** Green Building: Introduction, Objectives, Fundamental Principles, Benefits of Green Building, Examples of Green Building, International environmental policies, Government based environment conservation, community based environmental conservation.	8	29

Course Outcome:

Sr. No.	CO statement	Unit No
CO-1	Recall the structure and function of ecosystems, energy flow, biogeochemical cycles, and the importance of biodiversity conservation.	1
CO-2	Explain the advantages, limitations, and environmental implications of renewable and non-renewable energy sources.	2
CO-3	Describe the relationship between population growth, environmental degradation, and urbanization, highlighting their causes and effects.	3
CO-4	Apply the principles of green building and environmental conservation to suggest sustainable practices.	4

Teaching & Learning Methodology:
1. Problem - based Learning
2. Design Thinking
3. Cooperative-based Learning

Major Equipment:
1. Projector

Books Recommended:-
1. William P. Cunningham and Mary "Environmental Science: A Global Concern", Ann Cunningham
2. R. Rajagopalan "Environmental Studies”, Gary W. Heinke

CO-PO-PSO Matrix:

Co. No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9		PO10	PO11	PO12	PSO1	PSO2
CO-1	2	3	2	1		3			1			1	2	2	2
CO-2	2	2	3	1	3	2		1	2		2		2	1	1
CO-3	1	3	2	3	1	2		3	3		2	1	2	2	2
CO-4	0	2	3	3	2	3		3	3		3	1	3	1	1