

Satyug Darshan Institute of Engineering and Technology

Lesson Plan / Teaching Plan / Lecture Plan with Progress : BBA IIFSB - A - ...3rd. Semester : 2025-26

Course Name (Code) : **Environmental Sciences-I (VAC - 101-N1)**

Faculty : **Dr. Mayank Verma**

Topics / lectures are arranged in sequence - same - as to be taught in the class. Maintain data related to "Date" in its hard copy.					
S. No.	Lecture No	Topic Description	Teaching Pedagogy	Reference Material	Remarks, if any
1	1	Humans as hunter-gatherers; Mastery of fire;	Projector	S.N. 1&2	
2	2	Origin of agriculture; Emergence of city-states;	Projector	S.N. 1&2	
3	3	Great ancient civilizations and the environment, Indic Knowledge and Culture of sustainability;	Projector	S.N. 1&2	
4	4	Middle Ages and Renaissance; Industrial revolution and its impact on the environment,	Projector	S.N. 1&2	
5	5	Population growth and natural resource exploitation; Global environmental change.	Projector	S.N. 1&2	
6	6	Anthropocentric and eco-centric perspectives (Major thinkers);	Projector	S.N. 1&2	
7	7	The Club of Rome- Limits to Growth; UN Conference on Human Environment 1972; World Commission on Environment and Development	Projector	S.N. 1&2	
8	8	Rio Summit and subsequent international efforts.	Projector	S.N. 1&2	
9	9	Definition of resource; Classification of natural resources- biotic and abiotic, renewable and non-renewable.	Projector	S. N. 3&4	
10	10	Major type of biotic resources- Forests and Grasslands, Status and challenges.	Projector	S.N. 3&4	
11	11	Major type of biotic resources- Wetlands and Wildlife, Status and challenges.	Projector	S. N. 3&4	
12	12	Major type of biotic resources- Aquatic (fresh water and marine); and Microbes as a resource; Status and challenges.	Projector	S. N. 3&4	
13	13	Types of water resources- Fresh water and Marine resources; Availability and use of water resources; Environmental impact of over-exploitation,	Projector	S.N. 3&4	
14	14	Types of water resources- Issues and challenges; Water scarcity and stress; Conflicts over water.	Projector	S. N. 3&4	
15	15	Soil as a resource and its degradation.	Projector	S. N. 3&4	
16	16	Important minerals; Mineral exploitation; Environmental problems due to extraction of minerals and use;	Projector	S.N. 3&4	
17	17	Sources of energy and their classification, renewable and non-renewable sources of energy; Conventional energy sources- Coal, Oil, Natural gas,	Projector	S. N. 3&4	
18	18	Non-conventional energy sources- Solar, Wind, Tidal, Hydro, Wave,	Projector	S. N. 3&4	
19	19	Non-conventional Energy sources- Ocean energy, Thermal, Geothermal, Biomass,	Projector	S.N. 3&4	
20	20	Hydrogen and Fuel cells; Implications of Energy use on the environment.	Projector	S. N. 3&4	
21	21	Sustainable Development Goals (SDGs)- targets and indicators, challenges and strategies for SDGs.	Projector	S. N. 3&4	
22	22	Concepts of micro-, meso-, synoptic and planetary scales;	Projector	S. N. 5&6	
23	23	Temporal and spatial extents of local, regional, and global phenomena.	Projector	S. N. 5&6	
24	24	Impact of sectoral processes on Environment;	Projector	S. N. 5&6	
25	25	Types of Pollution- Air and Noise	Projector	S. N. 5&6	
26	26	Types of Pollution- Water and Soil	Projector	S. N. 5&6	
27	27	Types of Pollution- Thermal and Radioactive.	Projector	S. N. 5&6	
28	28	Types of Pollution- Municipal Solid Waste, Hazardous waste; Transboundary air pollution.	Projector	S. N. 5&6	

29	29	Types of Pollution- Acid Rain; Smog.	Projector	S. N. 5&6	
30	30	Land Degradation, Deforestation	Projector	S. N. 5&6	
31	31	Desertification, Urbanization.	Projector	S. N. 5&6	
32	32	Biodiversity loss: Past and current trends, impact.	Projector	S. N. 5&6	
33	33	Ozone layer depletion	Projector	S. N. 5&6	
34	34	Climate change, Natural and Man-made (Anthropogenic) Disaster	Projector	S. N. 5&6	
35	35	Biodiversity and its distribution: Biodiversity as a natural resource; Levels and types;	Projector	S. N. 7,8&9	
36	36	Biodiversity in India and the world; Biodiversity hotspots.	Projector	S. N. 7,8&9	
37	37	Ecosystems and ecosystem services: Major ecosystem types in India and their basic characteristics forests, wetlands, grasslands,	Projector	S. N. 7,8&9	
38	38	Ecosystems and ecosystem services: Major ecosystem types in India and their basic characteristics agriculture, coastal and marine;	Projector	S. N. 7,8&9	
39	39	Ecosystem services- classification and significance. Threats to biodiversity and ecosystems:	Projector	S. N. 7,8&9	
40	40	Land use and land cover change; Commercial exploitation of species;	Projector	S. N. 7,8&9	
41	41	Invasive species; Fire, disasters and climate change.	Projector	S. N. 7,8&9	
42	42	Major conservation policies: in-situ and ex-situ conservation; Major protected areas; Biosphere reserves; Ecologically Sensitive Areas; Coastal	Projector	S. N. 7,8&9	
43	43	The role of traditional knowledge for biodiversity conservation,	Projector	S. N. 7,8&9	
44	44	Community-based conservation; Gender and conservation.	Projector	S. N. 7,8&9	
45	45	Overview of the following conventions and protocols- Convention on Biological Diversity (CBD); Cartagena Protocol on Biosafety; sharing;	Projector	S. N. 7,8&9	
46	46	Nagoya Protocol on Access and Benefit-, Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES);	Projector	S. N. 7,8&9	
47	47	Ramsar Convention on Wetlands of International Importance; Ramsar sites; United Nations Convention to Combat Desertification (UNCCD).	Projector	S. N. 7,8&9	

Course Outcomes (COs)

COx	
CO 1	Understand human interaction with the environment and efforts taken for emergence of environmentalism at international level.
CO 2	Understand concept of natural resources, their distribution, conservation, management and sustainable utilization.
CO 3	Develop critical thinking towards local, regional and global environmental issue.
CO3	Describe the concept of ecosystem, biodiversity and their conservation at national and international levels.

Study Material / Books / Web-resources / Online Courses Links etc.

S. No.	
1	Kaushik, A., & Kaushik, C. P. (2006). Perspectives in environmental studies. New Age International.
2	Rajagopalan, R. (2011). Environmental Studies: From Crisis to Cure. India: Oxford University Press.
3	Kaushik, A., & Kaushik, C. P. (2006). Perspectives in environmental studies. New Age International.
4	Sharma, P. D., & Sharma, P. D. (2012). Ecology and environment. Rastogi Publications.
5	Kaushik, A., & Kaushik, C. P. (2006). Perspectives in environmental studies. New Age International.
6	Rajagopalan, R. (2011). Environmental Studies: From Crisis to Cure. India: Oxford University Press.
7	Sharma, P. D., & Sharma, P. D. (2012). Ecology and environment. Rastogi Publications.
8	Kaushik, A., & Kaushik, C. P. (2006). Perspectives in environmental studies. New Age International.
9	Rajagopalan, R. (2011). Environmental Studies: From Crisis to Cure. India: Oxford University Press.