



NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)



LESSON PLAN

SUBJECT: Th-5 (ENVIRONMENTAL SCIENCE)

Name Of The Faculty :-MISS ALIVAJYOTI BARIK & MR. ADITYA PRAKASH DAS

Branch :- AE/CE/EE/EEE/ME

Semester :- 1ST

Session :- 2024-25

Examination :- 2024 (W)

CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	Distribution of periods as per Syllabus
1	ECOSYSTEM	13
2	AIR AND NOISE POLLUTION	14
3	WATER AND SOIL POLLUTION	13
4	RENEWABLE SOURCES OF ENERGY	13
5	SOLID WASTE MANAGEMENT , ISO 14000 & ENVIRONMENTAL MANAGEMENT	13
	Total Period:	66

Spacin
13.08.24

Sign of Faculty

Spacin
13.08.24

Sign of H.O.D.

Discipline: AE/CE/EE/EEE /ME	Semester: 1ST	Name of the Teaching Faculty: MISS ALIVAJYOTI BARIK & MR. ADTYA PRAKAS DAS	
		SESSION : 2024-25	EXAMINATION : 2024 (W)
Week	Class Day	Topics to be Covered	
1st	1st	UNIT-I:-ECOSYSTEM: Introduction of EVS, Structure of ecosystem	
	2nd	Biotic & Abiotic components	
	3rd	Food chain and food web	
	4th	Aquatic (Lentic and Lotic) and terrestrial ecosystem	
2nd	1st	Carbon cycle	
	2nd	Nitrogen cycle	
	3rd	Sulphur cycle	
	4th	Phosphorus cycle	
3rd	1st	Global warming	
	2nd	Causes of global warming	
	3rd	Green House Effect	
	4th	Effect of global warming Process of global warming	
4th	1st	Ozone layer depletion	
	2nd	UNIT-II:-AIR AND NOISE POLLUTION Introduction of pollution Definition of pollution and pollutant	
	3rd	Natural and man-made sources of air pollution(Refrigerants, I.C., Boiler)	
	4th	Air Pollutants: Types, Particulate Pollutants	
5th	1st	control of air pollution (Bag filter, Cyclone	
	2nd	Effects of air pollution (Electrostatic Precipitator)	
	3rd	Effects of air pollution (Bag filter, Cyclone separator)	
	4th	Gaseous Pollution Control: Absorber	
6th	1st	Gaseous Pollution Control: Catalytic Converter	
	2nd	Effects of air pollution due to Refrigerants	
	3rd	Effects of air pollution due to I.C.Boiler	
	4th	Noise pollution: sources of pollution	
7th	1st	Measurement of pollution level	
	2nd	Effects of Noise pollution	
	3rd	Noise pollution (Regulation and Control) Rules, 2000	
	4th	UNIT-III:- WATER AND SOIL POLLUTION	
8th	1st	Characteristics of water pollutants	
	2nd	Turbidity ,pH, total suspended solids,Total solids BOD and COD: Definition, calculation	
	3rd	1 st internal assesment	
	4th	1 st internal assesment	

Week	Class Day	Topics to be Covered
9th	1st	Waste Water Treatment: Primary methods
	2nd	Sedimentation, froth floatation
	3rd	Secondary methods: Activated sludge treatment
	4th	Trickling filter, Bioreactor
10th	1st	Tertiary Method: Membrane separation technology
	2nd	RO (reverse osmosis). Causes and Effects of Soil Pollution
	3rd	Preventive measures of Soil Pollution
	4th	Causes-Excessive use of Fertilizers
11th	1st	Pesticides and Insecticides, Irrigation, E-Waste.
	2nd	UNIT-IV:-RENEWABLE SOURCES OF ENERGY
	3rd	Flat plate collector (Liquid & Air)
	4th	Theory of flat plate collector. Importance of coating.
12th	1st	Solar pond, Solar water heater, solar dryer, Solar
	2nd	Biomass: Overview of biomass as energy source
	3rd	Thermal characteristics of biomass as fuel, Anaerobic digestion
	4th	Biogas production mechanism. Utilization and
13th	1st	Wind energy: Current status and future prospects of wind energy
	2nd	Wind energy in India. Environmental benefits and
	3rd	New Energy Sources: Need of new sources
	4th	Different types new energy sources. Applications of (Hydrogen energy)
14th	1st	Application of (Ocean energy resources, Tidal energy conversion.)
	2nd	Concept, origin and power plants of geothermal
	3rd	UNIT-V:-SOLID WASTE MANAGEMENT, ISO 14000 & ENVIRONMENTAL MANAGEMENT
	4th	Sources and characteristics of : Municipal solid waste
15th	1st	Sources and characteristics of E- waste
	2nd	Sources of biomedical waste
	3rd	characteristics of biomedical waste
	4th	Metallic wastes and Non-Metallic wastes (lubricants,
16th	1st	2nd internal assesment
	2nd	2nd internal assesment
	3rd	Collection and disposal : Collection and disposal: MSW (3R, principles, energy recovery, sanitary landfill)
	4th	Air quality act 2004, Hazardous waste, air pollution control act 1981
17th	1st	water pollution and control act 1996
	2nd	structure and role of central and state pollution control board
	3rd	concept of carbon credit, carbon footprint, environmental management in fabrication
	4th	ISO 14000: Implementation in industries, Benefits

Signature
13-08-24

Sign of Faculty

Signature
13/08/24

Sign of