LESSON PLAN: (ENVIRONMENTAL STUDIES)		
Discipline :	**CIVIL ENGINEERING**	
Faculty :	**ASHIS RANJAN PATEL**	
Semester :	**3RD**	
Duration :	**14 WEEKS (1ST AUGUST 2023 to 30TH NOVEMBER 2023)**	
Work Load :	**Lecture :**	**4 Lectures per week (50 minutes per Class)**
Week	**Week Day**	**Theory**
1st	1st	The Multidisciplinary nature of environmental studies
	2nd	Definition & scope of environmental engineering
	3rd	importance of environmental engineering
	4th	Need for public awareness.
2nd	5th	Natural Resources ,Renewable and non renewable resources
	6th	Natural resources and associated problems, Forest resources: Use and over-exploitation, deforestation, case studies
	7th	Timber extraction mining, dams and their effects on forests and tribal people.
	8th	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
3rd	9th	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.
	10th	Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity,
	11th	Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
	12th	Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification.
4th	13th	Role of individual in conservation of natural resources.
	14th	Equitable use of resources for sustainable life styles.
	15th	Concept of an eco system.
	16th	Structure and function of an eco system
5th	17th	Producers, consumers, decomposers.
	18th	Energy flow in the eco systems.
	19th	Ecological succession
	20th	Food chains, food webs and ecological pyramids
6th	21st	Introduction, types, characteristic features, structure and function of the following eco system
	22nd	Forest ecosystem,Aquatic eco systems (ponds, streams, lakes, rivers, oceans, estuaries).
	23rd	Introduction-Definition: genetics, species and ecosystem diversity
	24th	Biogeographically classification of India.
7th	25th	Value of biodiversity
	26th	consumptive use, productive use,
	27th	Social ethical, aesthetic and optin values
8th	29th	Threats to biodiversity: Habitats loss,
	30th	poaching of wild life, man wildlife conflicts
	31st	Definition cause , effect and control measures of Air pollution
	32nd	Definition cause , effect and control measures of Water pollution.

9th	33rd	Definition cause , effect and control measures of Soil pollution
	34th	Definition cause , effect and control measures of Marine pollution
	35th	Definition cause , effect and control measures of Noise pollution.
	36th	Definition cause , effect and control measures of Thermal pollution
10th	37th	Nuclear hazards.
	38th	Causes and effects of urban and industrial wastes
	39th	control measures of urban and industrial wastes
	40th	Role of an individual in prevention of pollution
11th	41st	Floods, earth quake
	42nd	cyclone and landslides
	43rd	unsustainable to sustainable development
	44th	Urban problems related to energy
12th	45th	Water conservation, rain water harvesting, water shed management.
	46th	Resettlement and rehabilitation of people; its problems and concern
	47th	Environmental ethics: issue and possible solutions. Climate change, global warming, acid rain,
	48th	Ozone layer depletion, nuclear accidents and holocaust, case studies.
13th	49th	Air (prevention and control of pollution) Act.
	50th	Water (prevention and control of pollution) Act. Public awareness.
	51st	Population growth and variation among nations.
	52nd	Population explosion- family welfare program.
14th	53rd	Environment and human health
	54th	Human rights.
	55th	Value education
	56th	Role of information technology in environment and human health