GOVT. POLYTECHNIC, NAYAGARH

LESSON PLAN

DISCIPLINE: MECHANICAL ENGINEERING	SEMESTER:3rd(2023-24)	NAME OF THE FACULTY: Himanshu Patra, PTGF(Mech)
SUBJECT: ENVIRONMENTAL STUDIES(TH-5)	NO. OF DAYS/WEEK CLASS ALLOTTED: 4P/WEEK	SEMESTER FROM DATE:01/08/2023 TO :30/11/2023 NO. OF WEEKS: 15

Sl No.	week	CLASS Day	Topics to be covered
1	1st	1st day	Introduction to Environmental studies
		2nd day	Scope and importance of EVS.
		3rd day	Need for public awareness
		4th day	Need for public awareness.
2	2nd	1st day	Renewable and non renewable resources
		2nd day	Natural resources and associated problems. Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining, dams and their effects on forests and tribal people.
		3rd day	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
		4th day	Mineral Resources: Use and exploitation, environmental effects of extractingand using mineral resources.
3	3rd	1st day	Food Resources: World food problems ,changes caused by agriculture and overgrazing,effectsofmodernagriculture,fertilizerspesticidesproblems, waterlogging, salinity.
		2nd day	Energy Resources: Growing energy need, renewable and nonrenewable energy sources, use of alternate energy sources, case studies.
		3rd day	Land Resources: Land as a resource ,land degradation ,man induces landslides, soil erosion, and desertification.
		4th day	Role of individual in conservation of natural resources.
4	4th	1st day	Role of individual in conservation of natural resources.
		2nd day	Equitable use of resources for sustainable lifestyles.
		3rd day	Concept of an ecosystem. Structure and function of an ecosystem.
		4th day	Producers, consumers, decomposers.
5	5th	1st day	Energy flow in the ecosystems.

		2nd day	Ecological succession.
		3rd day	Food chains, food web sand ecological pyramids.
		4th day	Introduction, types, characteristic features, structure and function of the following ecosystem:
6	6th	1st day	Forest ecosystem:
		2nd day	Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).
		3rd day	Introduction-Definition: genetics, species and ecosystem diversity.
		4th day	Biogeographically classification of India.
7	7th	1st day	Value of biodiversity: consumptive use, productive use,
		2nd day	Social, ethical, aesthetic and opt in values.
		3rd day	Biodiversity at global and national level.
		4th day	Biodiversity at local level.
8	8th	1st day	Threats to biodiversity: Habitats loss, poaching of wild life.
		2nd day	man wildlife conflicts.
		3rd day	Definition Causes, effects and control measures of:Air pollution.
		4th day	Water pollution.
9	9th	1st day	Soil pollution
		2nd day	Marine pollution
		3rd day	Noise pollution.
		4th day	Thermal pollution
10	10th	1st day	Nuclear hazards.
		2nd day	Solid waste Management
		3rd day	Causes, effects and control measures of urban and industrial wastes.
		4th day	Role of an individual in prevention of pollution.
11	11th	1st day	Disaster management
		2nd day	Floods, earth quake, cyclone and landslides.
		3rd day	From unsustainable to sustainable development. Urban problems related toenergy.

		4th day	Water conservation, rain water harvesting
12	12th	1st day	water shed management.
		2nd day	Resettlement and rehabilitation of people; its problems and concern.
		3rd day	Environmental ethics: issue and possible solutions.
		4th day	Climate change, global warming, acid rain, ozone layer depletion
13	13th	1st day	nuclear accidents and holocaust, case studies
		2nd day	Air (prevention and control of pollution) Act.
		3rd day	Water (prevention and control of pollution) Act.
		4th day	Public awareness.
14	14th	1st day	Population growth and variation among nations.
		2nd day	Population explosion-family welfare program.
		3rd day	Population explosion-family welfare program.
		4th day	Environment and human health.
15	15th	1st day	Environment and human health.
		2nd day	Human rights.
		3rd day	Value education.
		4th day	Role of information technology in environment and human health.

Himanshu Poddar
31/07/2023
Lect, Mech (PTGF)