GOVT. POLYTECHNIC SAMBALPUR LESSON PLAN

ELECTRICAL ENGG.	SEMESTER: 3RD	NAME OF THE TEACHING FACULTY: PRITISH KUMAR MOHANTY
No. of Days / per week class allotted : 4 Subject : Environmental Studies	NO OF DAYS / PER WEEK CLASS ALLOTED :04	Semester From date : 01.08.2023 To Date : 30.11.2023 No. of Weesks : 15
Week		Topics
1ST WEEK August	1ST	**1. The Multidisciplinary nature of environmental studies:** 1.1 Definition,
	2ND	scope and importance.
	3RD	1.2 Need for public awareness.
2ND WEEK August	1ST	**2.Natural Resources:** **Renewable and non renewable resources:** 2.1 Natural resources and associated problems
	2ND	2.1.1. Forest resources: Use and over-exploitation, deforestation, case studies,
	3RD	Timber extraction mining, dams and their effects on forests and tribal people.
	4TH	2.1.2. Water resources: Use and over-utilization of surface and ground water, floods, drought,conflicts over water, dam's benefits and problems.
3RD WEEK August	1ST	2.1.3. Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources. 2.1.4. Food Resources: World food problems,changes caused by agriculture
	2ND	effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity,
	3RD	2.1.5. Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
	4TH	2.1.6. Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification.
4TH WEEK August	1ST	2.2 Role of individual in conservation of natural resources.
	2ND	2.3 Equitable use of resources for sustainable life styles.
	3RD	**3.Systems:** 3.1. Concept of an eco system.
	4TH	3.2. Structure and function of an eco system.
1ST WEEK September	1ST	3.3. Producers, consumers, decomposers.
	2ND	3.4. Energy flow in the eco systems.
	3RD	3.5. Ecological succession.
	4TH	3.6. Food chains, food webs and ecological pyramids.
2ND WEEK September	1ST	3.7. Introduction, types, characteristic features, structure and function of the following eco system:
	2ND	3.8. Forest ecosystem: 3.9. Aquatic eco systems (ponds, streams, lakes, rivers, oceans,estuaries)
	3RD	**4 Biodiversity and it's Conservation:** 4.1. Introduction
	4TH	Definition: genetics,species and ecosystem diversity.
3RD WEEK September	1ST	4.2. Biogeographically classification of India.
	2ND	4.3. Value of biodiversity: consumptive use,
	3RD	productive use, social ethical, aesthetic and optin values.
	4TH	4.4. Biodiversity at global,
4TH WEEK September	1ST	national and local level.
	2ND	4.5. Threats to biodiversity: Habitats loss,
	3RD	poaching of wild life, Man wildlife conflicts

1ST WEEK October	1ST	**5 Environmental Pollution:** 5.1. Definition Causes,
	2ND	5.1.1 Air pollution.
	3RD	5.1.2 Water pollution.
	4TH	5.1.3 Soil pollution
2ND WEEK October	1ST	5.1.4 Marine pollution
	2ND	5.1.5 Noise pollution.
	3RD	5.1.6 Thermal pollution
	4TH	5.1.7 Nuclear hazards.
3RD WEEK October	1ST	Solid waste Management: Causes, effects
	2ND	and control measures of urban and industrial wastes.
	3RD	5.3. Role of an individual in prevention of pollution.
	4TH	5.4. Disaster management: Floods, earth quake, cyclone and landslides.
1ST WEEK November	1ST	**6 Social issues and the Environment:** 6.1. Form unsustainable to sustainable development.
	2ND	*6.2. Urban problems related to energy.*
	3RD	6.3. Water conservation, rain water harvesting, water shed management.
	4TH	6.4. Resettlement and rehabilitation of people; its problems and concern.
2ND WEEK November	1ST	6.5. Environmental ethics: issue and possible solutions.
	2ND	6.6. Climate change, global warming, acid rain,
	3RD	ozone layer depletion, nuclear accidents and holocaust, case studies.
	4TH	6.7. Air (prevention and control of pollution) Act.
3RD WEEK November	1ST	6.8. Water (prevention and control of pollution) Act.
	2ND	6.9. Public awareness.
	3RD	**7 Human population and the environment:** 7.1. Population growth and variation among nations.
	4TH	7.2. Population explosion
4TH WEEK November	1ST	family welfare program.
	2ND	7.3. Environment and human health.
	3RD	7.4. Human rights.
	4TH	7.5. Value education

Signature of faculty

signature of HOD Electrical Engineering Dept.