

Discipline: CE,EE&ME	Semester: 3 <sup>th</sup>	Name of the Teaching Faculty: RADHA KRUSHNA MALLICK
Subject: ENVIRONMENTAL STUDIES	No. of Days/per week class allotted: 04	Semester From Date: 1-8-2023 To 30-11-2023 No. of Weeks : 15
Week	Class Day	Theory Topics
1 <sup>st</sup>	01	<b>Unit 1: The Multidisciplinary nature of environmental studies</b> Definition of Environmental Studies.
	02	Scope of Environmental Studies.
	03	Importance of Environmental Studies.
	04	Need for public awareness.
2 <sup>nd</sup>		<b>Unit 2: Natural Resources: Forest resources:</b> Use and over-exploitation, deforestation, case studies, Timber extraction mining.
	01	Dams and their effects on forests and tribal people.
	02	<b>Water resources:</b> Use and over-utilization of surface and ground water, floods, drought.
	03	Conflicts over water, dam's benefits and problems.
	04	<b>Mineral Resources:</b> Use and exploitation, environmental effects of extracting and using mineral resources.
		<b>Food Resources:</b> World food problems, changes caused by agriculture and over grazing, effects of modern agriculture.
3 <sup>rd</sup>	01	Fertilizers- pesticides problems, water logging, salinity.
	02	<b>Energy Resources:</b> Growing energy need, renewable and non-renewable energy sources.
	03	Use of alternate energy sources, case studies.
	04	<b>Land Resources:</b> Land as a resource, land degradation. Man induces landslides, soil erosion, and desertification.
4 <sup>th</sup>	01	Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles.
	02	<b>Unit 3: Systems</b> Concept of an eco system.
	03	Structure and function of an eco system.
	04	Producers, consumers, decomposers. Energy flow in the eco systems.
5 <sup>th</sup>	01	Ecological succession.
	02	Food chains, food webs.
	03	Ecological pyramids.
	04	Introduction, types, characteristic features eco system structure and function of the Forest ecosystem
6 <sup>th</sup>	01	Aquatic eco systems (ponds, streams).
	02	Aquatic eco systems (lakes, rivers).
	03	Aquatic eco systems oceans, estuaries.
	04	<b>Unit 4: Biodiversity and its Conservation</b> Introduction-Definition: genetics, species and ecosystem diversity: Biogeographically classification of India.
7 <sup>th</sup>	01	Value of biodiversity: consumptive use, productive use.
	02	Social, ethical, aesthetic and option values.
	03	Biodiversity at global level.
	04	Biodiversity national and local level. Threats to biodiversity: Habitats loss,
8 <sup>th</sup>	01	Poaching of wild life, man wildlife conflicts.
	02	<b>Unit 5: Environmental Pollution.</b> Definition, Causes, effects of:

8/11

R. Mallik  
1-8-23

Principal  
Govt. Polytechnic





		a) Air pollution
	03	Control measures of: a) Air pollution
	04	Definition, Causes, effects b) Water pollution of
9 <sup>th</sup>		Control measures of b) Water pollution
	01	Definition, Causes, effects and control measures of c) Soil pollution
	02	control measures of c) Soil pollution
	03	Definition, Causes, effects and control measures of d) Marine pollution
	04	c) Soil pollution e) Noise pollution.
		control measures of d) Marine pollution
10 <sup>th</sup>		Definition, Causes, effects and control measures of e) Noise pollution.
	01	Control measures of e) Noise pollution
	02	Definition, Causes, effects and
	03	Control measures of f) Thermal pollution
	04	Nuclear hazards.
11 <sup>th</sup>		Solid waste Management: Causes, effects
	01	Control measures of urban and industrial wastes.
	02	Role of an individual in prevention of pollution.
	03	Disaster management: Floods, earth quake,
	04	Cyclone and landslides.
		<b>Unit 6: Social issues and the Environment</b> Form unsustainable to sustainable development.
12 <sup>th</sup>	01	Urban problems related to energy.
	02	Water conservation, rain water harvesting,
	03	Water shed management.
	04	Resettlement and rehabilitation of people; its problems and concern.
		Environmental ethics: issue and possible solutions.
13 <sup>th</sup>	01	Climate change, global warming, acid rain.
	02	Ozone layer depletion.
	03	Nuclear accidents and holocaust, case studies.
	04	Air (prevention and control of pollution) Act.
		Water (prevention and control of pollution) Act.
14 <sup>th</sup>	01	Public awareness.
	02	<b>Unit 7: Human population and the environment</b> Population growth
	03	Variation of population among nations.
	04	Population explosion.
		Family welfare program.
15 <sup>th</sup>	01	Environment and human health.
	02	Human rights.
	03	Value education.
	04	Role of information technology in environment.
		Role of information technology in human health.

*[Handwritten signature]*

*R. Mallick*  
7.8.23

*[Handwritten signature]*  
Principal  
Govt. Polytechnic  
Malkangiri. (Odisha)