

ASIAN SCHOOL OF TECHNOLOGY, KHORDHA
 LESSON PLAN
 SESSION -2024-2025

Discipline: Mechanical engineering	Semester: 3rd	Name of the Teaching Faculty:
Subject: ENVIRONMETAL STUDIES	No. of Days/per week class allotted: 04	No. of Weeks : 15
Week	Class Day	Theory Topics
1 st	01	Unit 1: The Multidisciplinary nature of environmental studies Definition of Environmental Studies.
	02	Scope of Environmental Studies.
	03	Importance of Environmental Studies, Need for public awareness.
	04	Unit 2: Natural Resources: Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining.
2 nd	01	Dams and their effects on forests and tribal people.
	02	Water resources: Use and over-utilization of surface and ground water, floods, drought.
	03	Conflicts over water, dam's benefits and problems, Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.
	04	Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture.
3 rd	01	Fertilizers- pesticides problems, water logging, salinity.
	02	Energy Resources: Growing energy need, renewable and non-renewable energy sources.
	03	Use of alternate energy sources, case studies, Man induces landslides, soil erosion, and desertification.
	04	Land Resources: Land as a resource, land degradation.
4 th	01	Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles.
	02	Unit 3: Systems Concept of an eco system.
	03	Structure and function of an eco system.
	04	Producers, consumers, decomposers, Energy flow in the eco systems.
5 th	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 th	01	Aquatic eco systems (ponds, streams).
	02	Aquatic eco systems (lakes, rivers).
	03	Aquatic eco systems oceans, estuaries.
7 th	04	Unit 4: Biodiversity and its Conservation Introduction-Definition: genetics, species and ecosystem diversity, Biogeographically classification of India.
	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 th	01	Poaching of wild life, man wildlife conflicts.
	02	Unit 5: Environmental Pollution. Definition, Causes, effects of: a) Air pollution

	03	Control measures of: a) Air pollution
	04	Definition, Causes, effects and Control measures of Water pollution.
9 th	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 c) Soil pollution e) Noise pollution.
	04	Definition, Causes, effects and control measures of e) Noise pollution.
10 th	01	Definition, Causes, effects of f) Thermal pollution
	02	Control measures of f) Thermal pollution
	03	Nuclear hazards.
	04	Solid waste Management: Causes, effects
11 th	01	Control measures of urban and industrial wastes.
	02	Role of an individual in prevention of pollution.
	03	Disaster management: Floods, earth quake, Cyclone and landslides
	04	Unit 6: Social issues and the Environment Form unsustainable to sustainable development.
12 th	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 th	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 th	01	Public awareness.
	02	Unit 7: Human population and the environment Population growth
	03	Variation of population among nations.
	04	Population explosion, Family welfare program.
15 th	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.