

# KIIT POLYTECHNIC, BHUBANESWAR

## LESSON PLAN

Session: (2022-23)

<b>Discipline :</b> Electrical Engineering	<b>Semester:</b> 3 <sup>rd</sup>	<b>Name of the Teaching Faculty:</b> RAKESH ROSHAN <b>Email:</b> <a href="mailto:rakeh.roshanfel@kp.kiit.ac.in">rakeh.roshanfel@kp.kiit.ac.in</a>
Subject: Environmental Study	No. Of Days/Week Class Allotted:4	<b>Start Date:</b> 14/09/2022 <b>End Date:</b> 21/01/2023 No. Of Weeks : 15

Week	Class Day	Theory
<b>Unit-I: The Multidisciplinary nature of environmental studies</b>		
	1st	Definition, scope and importance, Need for public awareness.
	2nd	Revision
	3rd	Assignment evaluation, class test
<b>Unit-II: Natural Resources</b>		
	4th	Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction.
	1st	Mining, dams and their effects on forests and tribal people
	2nd	Water resources: Use and over-utilization of surface and ground water, floods.
3rd	3rd	Drought, conflicts over water, dams benefits and problems
	4th	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources
	1 <sup>st</sup>	Food Resources: World food problems, changes caused by agriculture and over grazing.
	2nd	Effects of modern agriculture, fertilisers-pesticides problems, water logging, salinity.
4th	3 <sup>rd</sup>	Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies
	4 <sup>th</sup>	Difference between renewable and non renewable energy source
	1 <sup>st</sup>	Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification
	2nd	Soil erosion and desertification
5th	3 <sup>rd</sup>	Revision
	4 <sup>th</sup>	Assignment evaluation, class test
<b>Unit 3: Eco Systems</b>		
	1 <sup>st</sup>	Concept of an eco system. Structure and function of an eco system. Producers, consumers, decomposers.
	2nd	Producers, consumers , decomposers.
	3 <sup>rd</sup>	Energy flow in Ecosystems
	4 <sup>th</sup>	Ecological succession Food chains, food webs.

6th	1 <sup>st</sup>	Food webs and ecological pyramids
	2 <sup>nd</sup>	Introduction, types, characteristic features, structure and function of the following eco system: Forest ecosystem: Aquatic eco systems (ponds, streams, lakes, .
	3 <sup>rd</sup>	Forest ecosystem
	4 <sup>th</sup>	Aquatic eco systems-ponds
7th	1 <sup>st</sup>	Aquatic eco systems-ponds, streams, lakes
	2 <sup>nd</sup>	Aquatic eco systems- rivers, Oceans, estuaries
	3 <sup>rd</sup>	Revision
	4 <sup>th</sup>	Assignment evaluation, class test
<b>Unit 4: Biodiversity and it's Conservation</b>		
8th	1 <sup>st</sup>	Introduction-Definition: genetics, species and ecosystem diversity.
	2 <sup>nd</sup>	Biogeographically classification of India.
	3 <sup>rd</sup>	Biodiversity at global
	4 <sup>th</sup>	Threats to biodiversity: Habitats loss
	1 <sup>st</sup>	Revision
	2 <sup>nd</sup>	Assignment evaluation, class test
<b>Unit 5: Environmental Pollution.</b>		
	3 <sup>rd</sup>	Air pollution- Sources , Effects and control
	4 <sup>th</sup>	Water pollution- Sources , Effects and control
9th	1 <sup>st</sup>	Soil pollution- Sources , Effects and control
	2 <sup>nd</sup>	Marine pollution- Sources , Effects and control
	3 <sup>rd</sup>	Noise pollution- Sources , Effects and control
	4 <sup>th</sup>	Thermal pollution- Sources , Effects and control
10th	1 <sup>st</sup>	Nuclear hazards- Sources , Effects and control
	2 <sup>nd</sup>	Revision
	3 <sup>rd</sup>	Assignment evaluation, class test
<b>Unit 6: Social issues and the Environment</b>		
	4 <sup>th</sup>	Form unsustainable to sustainable development.
11th	1 <sup>st</sup>	Urban problems related to energy.
	2 <sup>nd</sup>	Water conservation, rain water harvesting, water shed management.
	3 <sup>rd</sup>	Resettlement and rehabilitation of people; its problems nd concern.
	4 <sup>th</sup>	Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies.
12th	1 <sup>st</sup>	Air (prevention and control of pollution) Act.
	2 <sup>nd</sup>	Water (prevention and control of pollution) Act.
	3 <sup>rd</sup>	Public awareness

	4 <sup>th</sup>	Revision
13th	1 <sup>st</sup>	Assignment evaluation, class test
<b>Unit 7: Human population and the environment</b>		
	2nd	Population growth and variation among nations.
	3rd	Population explosion- family welfare program.
	4 <sup>th</sup>	Environment and human health.
14th	1 <sup>st</sup>	Human rights.
	2nd	Value education
	3rd	Role of information technology in environment and human health
	4 <sup>th</sup>	Revision
15th	1 <sup>st</sup>	Assignment evaluation, class test
	2nd	Previous year question preparation
	3rd	Previous year question preparation
	4 <sup>th</sup>	Previous year question preparation