

**GOVT. POLYTECHNIC BOLANGIR**  
**LESSON PLAN**

| Discipline :                          | Semester:                    | Name of the Teaching Faculty : Abraham Sabar   |
|---------------------------------------|------------------------------|--|
| Subject :<br>Environmental<br>Studies | No. of<br>Days /<br>per week | Semester From date : 15.09.2022 To Date : 22.12.2022   |
| Week                                  | Class Day                    | Topics   |
| 1ST                                   | 1st                          | <b>1. The Multidisciplinary nature of environmental studies:</b><br>1.1 Definition,  |
|                                       | 2nd                          | scope  |
|                                       | 3rd                          | and importance.  |
|                                       | 4th                          | 1.2 Need for public awareness.   |
| 2ND                                   | 1st                          | <b>2.Natural Resources:</b><br><b>Renewable and non renewable resources:</b><br>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,  |
| 3RD                                   | 1st                          | 2.1.3. Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.<br>2.1.4. Food Resources: World food problems, changes caused by agriculture and over grazing |
|                                       | 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,  |
|                                       | 4th                          | 2.1.6. Land Resources: Land as a resource, land degradation, man induces landslides,   |
| 4TH                                   | 1st                          | 2.2 Role of individual in conservation of natural resources.   |
|                                       | 2nd                          | 2.3 Equitable use of resources for sustainable life styles.  |
|                                       | 3rd                          | <b>3.Systems:</b><br>3.1. Concept of an eco system.  |
|                                       | 4th                          | 3.2. Structure and function of an eco system.  |
| 5TH                                   | 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.   |
| 6TH                                   | 1st                          | 3.7. Introduction, types, characteristic features, structure and function of the following eco system:   |
|                                       | 2nd                          | 3.8. Forest ecosystem:<br>3.9. Aquatic eco systems (ponds, streams, lakes, rivers, oceans, estuaries)  |
|                                       | 3rd                          | <b>4 Biodiversity and it's Conservation:</b><br><b>4.1. Introduction</b>   |
|                                       | 4th                          | Definition: genetics, species and ecosystem diversity.   |
| 7TH                                   | 1st                          | Value of biodiversity: consumptive use, productive use,  |
|                                       | 2nd                          | social ethical, aesthetic and optin values.  |
|                                       | 3rd                          | Biodiversity at global, national and local level.  |
|                                       | 4th                          | Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts.   |
|                                       | 1st                          | <b>Unit 5: Environmental Pollution.</b><br>Definition Causes, effects and control measures of:<br>a) Air pollution. b) Water pollution.  |

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| 8TH  | 2nd | c) Soil pollution d) Marine pollution e) Noise pollution.   |
|      | 3rd | f) Thermal pollution g) Nuclear hazards Solid waste Management: Causes, effects and control measures of urban and industrial wastes.                                    |
|      | 4th | Role of an individual in prevention of pollution. Disaster management: Flood, earth quake, cyclone and landslides.  |
| 9th  | 1st | Disaster management: Floods, earth quake, cyclone and landslides.   |
|      | 2nd | <b>Unit 6: Social issues and the Environment</b><br>Form unsustainable to sustainable development. Value of biodiversity: consumptive use, productive use,              |
|      | 3rd | Water conservation, rain water harvesting, water shed management.<br><br>Resettlement and rehabilitation of people; its problems and concern.                           |
|      | 4th | Environmental ethics: issue and possible solutions.<br>Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. |
| 10TH | 1st | Air (prevention and control of pollution) Act. Water (prevention and control of pollution) Act. Public awareness.   |
|      | 2nd | <b>Unit 7: Human population and the environment</b><br><b>Population growth and variation among nations.</b> Population explosion- family welfare program.              |
|      | 3rd | Environment and human health.   |
|      | 4th | Human rights.<br>Value education. Role of information technology in environment and human health.   |