

## LESSON PLAN FOR ENVIRONMENTAL STUDIES (Th5)

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| Discipline:<br>ELECTRICAL<br>ENGINEERING | Semester: 3rd                                | Name of the Teaching Faculty: SUBHRA PRATIK SAHOO (GF)                                                                                                                               |
| Subject:<br>ENVIRONMENTAL<br>STUDIES     | No. of days per<br>week class<br>allotted: 4 | Semester From Date : 16.08.2024 To Date : 08.11.2024<br><br>No. of Weeks : 12 Session: 2024-25                                                                                       |
| Week                                     | Class Day                                    | Theory                                                                                                                                                                               |
| 1st                                      | 1st                                          | <b>1. The Multidisciplinary nature of environmental studies:</b><br>Definition, scope and importance.                                                                                |
|                                          | 2nd                                          | 1.2 Need for public awareness.(cont.)                                                                                                                                                |
|                                          | 3rd                                          | 1.2 Need for public awareness.                                                                                                                                                       |
|                                          | 4th                                          | <b>2. Natural Resources:</b><br>Natural resources and associated problems.                                                                                                           |
| 2nd                                      | 1st                                          | 2.1.1. Forest resources: Use and over-exploitation, deforestation, case Studies, Timber extraction mining, dams and their effects on forests and tribal people.                      |
|                                          | 2nd                                          | 2.1.2. Water resources: Use and over-utilization of surface and groundwater, floods, drought, conflicts over water, dam's benefits and Problems.                                     |
|                                          | 3rd                                          | 2.1.3. Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.                                                                     |
|                                          | 4th                                          | 2.1.4. Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers-pesticides problems, water logging, salinity, |
| 3rd                                      | 1st                                          | 2.1.5. Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies.                                             |
|                                          | 2nd                                          | 2.1.6. Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification.                                                              |
|                                          | 3rd                                          | 2.2 Role of individual in conservation of natural resources.<br>2.3 Equitable use of resources for sustainable life styles.                                                          |
|                                          | 4th                                          | <b>3. System:</b><br>Concept of an eco system.<br>3.2. Structure and function of an eco system.                                                                                      |
| 4th                                      | 1st                                          | 3.3. Producers, consumers, decomposers.                                                                                                                                              |
|                                          | 2nd                                          | Energy flow in the eco systems.<br>Ecological succession.                                                                                                                            |
|                                          | 3rd                                          | 3.6. Food chains, food webs and ecological pyramids.<br>3.7. Introduction, types, characteristics<br>features structure and function of the following eco system                     |
|                                          | 4th                                          | 3.8. Forest ecosystem<br>3.9. Aquatic eco systems (ponds, streams, lakes, rivers, oceans,                                                                                            |
| 5th                                      | 1st                                          | <b>4. Biodiversity and it's Conservation:</b>                                                                                                                                        |
|                                          | 2nd                                          | 4.2. Biogeographically classification of India.                                                                                                                                      |
|                                          | 3rd                                          | Marine pollution                                                                                                                                                                     |

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|  | 4th | 4.3. Value of biodiversity: consumptive use, productive use, (cont.) |
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| 6th  | 1st | Noise pollution.                                                                                                             |
|      | 2nd | 5.1.6 Thermal pollution                                                                                                      |
|      | 3rd | 5.1.7 Nuclear hazards.                                                                                                       |
|      | 4th | 5.2. Solid waste Management: Causes, effects and control measures of urban and industrial wastes.                            |
| 7th  | 1st | 5.2. Solid waste Management: Causes, effects and control measures of urban and industrial wastes. (Cont.)                    |
|      | 2nd | 5.3. Role of an individual in prevention of pollution.                                                                       |
|      | 3rd | 5.4. Disaster management: Floods, earth quake, cyclone and landslides.                                                       |
|      | 4th | Question answer session.                                                                                                     |
| 8th  | 1st | <b>6. Social issues and the Environment:</b><br>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.                                                    |
| 9th  | 1st | 6.5. Environmental ethics: issue and possible solutions.                                                                     |
|      | 2nd | 6.6. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies.        |
|      | 3rd | 6.6. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies.(Cont.) |
|      | 4th | 6.7. Air (prevention and control of pollution) Act.                                                                          |
| 10th | 1st | 6.8. Water (prevention and control of pollution) Act.                                                                        |
|      | 2nd | 6.9. Public awareness.                                                                                                       |
|      | 3rd | <b>7. Human population and the environment:</b><br>Population growth and variation among nations.                            |
|      | 4th | 7.2. Population explosion- family welfare program.                                                                           |
| 11th | 1st | 7.3. Environment and human health.                                                                                           |
|      | 2nd | 7.4. Human rights.                                                                                                           |
|      | 3rd | 7.5. Value education                                                                                                         |
|      | 4th | 7.6. Role of information technology in environment and human health.                                                         |
| 12th | 1st | Public awareness.                                                                                                            |
|      | 2nd | 7.6. Role of information technology in environment and human health.                                                         |
|      | 3rd | 7.6. Role of information technology in environment and human health.(cont.)                                                  |
|      | 4th | 7.6. Role of information technology in environment and human health.(cont.)                                                  |

  
 16/08/24  
 Signature of Faculty

  
 16/08/24  
 HOD Electrical Engg.

  
 Academic Co-coordinator