Lesson Plan/ Course Break – up

MC- 102-T- ENVIRONMENT SCIENCE

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|  | **Name of the Faculty** | | | Mr. Kamaldeep Singh |  | |
| **Discipline** | | | B.Tech in Civil Engineering |
| **Semester** | | | III (2nd Year) |
| **Subject** | | | Environment Science |
| **Lesson Plan Duration** | | | 15 Weeks (from September to December2022) |
| **Work Load (Lecture / Practical) per week (in hrs.)** | | | Lectures – 03 |
| Week | | Theory | | | |  |
|  | | Lecture  Day | Topic (Including assignment / Test) | | |
| 1st | | 1 | Multidisciplinary nature of Environmental studies: Definition, scope and importance, | | |  |
| 2 | need for public awareness; Concept, Structure and function of an ecosystem: Producers, consumers and decomposers, | | |
| 3 | Energy flow in the ecosystem ,Ecological succession ,Food chains, Food webs and ecological  pyramids; | | |
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| 2nd | | 4 | Introduction, types, characteristics features, structure and function of Forest ecosystem, Grassland ecosystem ,Desert ecosystem, Aquatic ecosystem (Ponds,  Stream, lakes, rivers, oceans, estuaries); | | |
| 5 | Biodiversity: Introduction, Definition: genetic, species and ecosystem diversity, Bio geographical  classification of India, | | |
| 6 | Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and option values; Biodiversity at global, national and local level, India as a  mega diversity nation, Hot-spot of biodiversity, | | |
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| 3rd | | 7 | Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, | | |
| 8 | Endangered and endemic species of India, Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity | | |
| 9 | Renewable and non-renewable resources, Natural resources and associated problems , | | |
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| 4th | | 10 | Forest resources: Use and over-exploitation, deforestation, case studies | | |  |
| 11 | Timber extraction, mining, dams and their effects on forests and tribal people; | | |
| 12 | Water resources: Use and over utilization of surface and ground water, floods, droughts conflicts over water, dams benefits and problems; | | |
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| 5th | | 13 | Mineral resources: Use and exploitation, environmental effects of extracting and mineral resources; | | |
| 14 | Food resources: World food problem, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer pesticide problems, water logging, salinity; | | |
| 15 | Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies; | | |
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| 6th | | 16 | Land resources: Land as a resource, land degradation, main induced landslides, soil erosion and desertification, | | |

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|  | 17 | Role of an individual in conservation of natural resources, |  |
| 18 | Equitable use of resources for suitable lifestyle. |
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| **7th** | **1st Minor Test** | | |
| 8th | 19 | Definition of Environment Pollution; Causes, effects and control measures of: Air Pollution, |  |
| 20 | Water Pollution, Soil pollution, Marine pollution, |
| 21 | Noise pollution, Thermal pollution, Nuclear hazards; Solid waste Management: Causes effects and control measures of urban and industrial wastes; |
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| 9th | 22 | Role of and individual in prevention of pollution, |
| 23 | Pollution case studies; Disaster management: floods, earthquake, cyclone and landslides |
| 24 | Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, |
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| 10th | 25 | Case studies; different laws related to environment: Environment Protection Act, Air (Prevention and Control of Pollution) Act, |
| 26 | Water (Prevention and Control of Pollution) Act, Wildlife Protection Act, |
| 27 | Forest Conservation Act.; Issues involved in enforcement of environmental legislation, Public awareness |
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| 11th | 28 | Social issues and the Environment: From unsustainable to Sustainable development, |  |
| 29 | Urban problems related to energy; Water conservation, rain water harvesting, |
| 30 | Watershed management; Resettlement and rehabilitation of people; its problem and  concern, case studies; |
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| 12th | 31 | Environment ethics: Issues and possible solutions; |
| 32 | Wasteland reclamation; Consumerism and waste products; |
| 33 | Human Population growth, variation among nation, |
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| 13th | 34 | Population explosion- Family Welfare Programme, |
| 35 | Environment and human health , Human Rights, Value Education, HIV/AIDS, |
| 36 | Women and Child Welfare, |
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| **14th** | **2nd Minor test** | | |
| 15th | 37 | Role of Information Technology in Environment and human health, Case Studies |  |
|  | 38 | Role of Information Technology in Environment and human health, Case Studies |
|  | 39 | Role of Information Technology in Environment and human health, Case Studies |
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