

## ENVIRONMENTAL SCIENCES

|  |              |                                 |                        |                      |        |
|--|--------------|---------------------------------|------------------------|----------------------|--------|
| <b>Course Code</b>                     | 23AC1301     | <b>Year</b>                     | II                     | <b>Semester</b>      | I      |
| <b>Course Category</b>                 | Audit course | <b>Branch</b>                   | Common to all branches | <b>Course Type</b>   | Theory |
| <b>Credits</b>                         | 0            | <b>L-T-P</b>                    | 2-0-0                  | <b>Prerequisites</b> | Nil    |
| <b>Continuous Internal Evaluation:</b> | 30           | <b>Semester End Evaluation:</b> | Nil                    | <b>Total Marks:</b>  | 30     |

### Course Outcomes

After successful completion of the course, the student will be able to

|            |  |
|------------|--|
| <b>CO1</b> | Apply advanced solutions to measure the threats and hazards in environment to link with human natural systems.(L3) |
| <b>CO2</b> | Analyze the ethical ,cultural and historical interactions between man and environment.(L4)                         |
| <b>CO3</b> | Analyze various environmental assets and record for better management(L4)  |
| <b>CO4</b> | Analyze global issues to design and evaluate policies(L4)  |
| <b>CO5</b> | Apply system concepts to methodological social and environmental issues(L3)  |

### Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M: Medium, L:Low)

|            | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| <b>CO1</b> | 2   |     |     |     |     |     | 2   |     |     |      |      |      |      |      |
| <b>CO2</b> |     | 2   |     |     |     |     | 3   |     |     |      |      |      |      |      |
| <b>CO3</b> |     | 3   |     |     |     |     | 3   |     |     |      |      |      |      |      |
| <b>CO4</b> |     | 2   |     |     |     |     | 3   |     |     |      |      |      |      |      |
| <b>CO5</b> | 2   |     |     |     |     |     | 2   |     |     |      |      |      |      |      |

| UNIT NO    | Contents   | Mapped COs |
|------------|--|------------|
| <b>I</b>   | <b>INTRODUCTION TO ENVIRONMENT AND NATURAL RESOURCES</b><br>Introduction to environment. Natural resources & Management- Forest resources, Water resources, Mineral resources, Food resources, Energy resources - Uses, over-exploitation with case studies & Management | CO1<br>CO2 |
| <b>II</b>  | <b>ECOSYSTEMS AND BIODIVERSITY</b><br>Structural and Functional components of an ecosystem and Ecological succession. Biodiversity: Values, Threats and Conservation   | CO1<br>CO2 |
| <b>III</b> | <b>ENVIRONMENTAL POLLUTION AND CONTROL</b><br>Environmental Pollution - Air Pollution, Water pollution, Soil pollution and Noise pollution with case studies. Solid waste Management.  | CO3        |
| <b>IV</b>  | <b>GLOBAL ENVIRONMENT PROBLEMS &amp; GLOBAL EFFORTS AND EIA</b><br>Global warming, Ozone Depletion, Acid rains and Climate change. Environmental Impact Assessment & Environmental Management Plans  | CO4<br>CO5 |
| <b>V</b>   | <b>SOCIAL ISSUES AND ENVIRONMENTAL LEGISLATION</b><br>From Unsustainable to Sustainable development. Population growth, Environment and human health. Value Education. Women and Child Welfare. Environment Legislation  | CO4<br>CO5 |

**Learning Recourses****Text Books**

1. Anubha Kaushik and C.P. Kaushik, Text book of environmental studies New Age International Publisher (2014).
2. Erach Barucha, Text book of environmental studies for undergraduates courses, published by – University Grants Commission, University Press (2005)
3. Anindita Basak, Environmental Studies. Pearson (2009)

**Reference Books**

1. D.K. Asthana and Meera Asthana, A Text book of Environmental Studies, S. Chand (2010).
2. P.M Cherry Solid and Hazardous waste Management, CBS Publisher (2016).
3. Charles H. Eccleston, Environmental Impact Assessment, CRC Press (2011).