

**RESTRUCTURED CHOICE - BASED CREDIT SYSTEM DEPARTMENT OF  
ENVIRONMENTAL SCIENCE, OSMANIA UNIVERSITY**  
**(Effective from academic year 2015-2017)**  
**SEMESTER - I**

| <b>THEORY</b>    |  |                             |                 |                 |              |                |
|------------------|--|-----------------------------|-----------------|-----------------|--------------|----------------|
| <b>Paper</b>     | <b>Title</b>   | <b>Instruction hrs/Week</b> | <b>Marks</b>    |                 |              | <b>Credits</b> |
|                  |  |                             | <b>Internal</b> | <b>Semester</b> | <b>Total</b> |                |
| ES 101 T         | Environmental Chemistry                              | 4                           | 20              | 80              | 100          | 4              |
| ES 102 T         | Climatology and Safety Management                    | 4                           | 20              | 80              | 100          | 4              |
| ES 103 T         | Air Pollution and control                            | 4                           | 20              | 80              | 100          | 4              |
| ES 104 T         | Environmental Instrumentation and analytical Methods | 4                           | 20              | 80              | 100          | 4              |
| <b>PRACTICAL</b> |  |                             |                 |                 |              |                |
| ES 105 P         | Environmental Chemistry                              | 4                           | -               | -               | 50           | 2              |
| ES 106P          | Climatology and Safety Management                    | 4                           | -               | -               | 50           | 2              |
| ES 107 P         | Air Pollution and Control                            | 4                           | -               | -               | 50           | 2              |
| ES 108 P         | Environmental Instrumentation and analytical Methods | 4                           | -               | -               | 50           | 2              |
|                  | <b>TOTAL</b>   |                             | -               | -               | 600          | 24             |

**SEMESTER II**

| <b>THEORY</b>    |                                  |                             |                 |                 |              |                |
|------------------|----------------------------------|-----------------------------|-----------------|-----------------|--------------|----------------|
| <b>Paper</b>     | <b>Title</b>                     | <b>Instruction hrs/Week</b> | <b>Marks</b>    |                 |              | <b>Credits</b> |
|                  |                                  |                             | <b>Internal</b> | <b>Semester</b> | <b>Total</b> |                |
| ES 201 T         | Environmental Microbiology       | 4                           | 20              | 80              | 100          | 4              |
| ES 202 T         | Ecology and Ecosystem Dynamics   | 4                           | 20              | 80              | 100          | 4              |
| ES 203 T         | Waste water treatment Technology | 4                           | 20              | 80              | 100          | 4              |
| ES 204 T         | Geo Environment                  | 4                           | 20              | 80              | 100          | 4              |
| <b>PRACTICAL</b> |                                  |                             |                 |                 |              |                |
| ES 205 P         | Environmental Microbiology       | 4                           | -               | -               | 50           | 2              |
| ES 206 P         | Ecology and Ecosystem Dynamics   | 4                           | -               | -               | 50           | 2              |
| ES 207 P         | Waste water treatment Technology | 4                           | -               | -               | 50           | 2              |
| ES 208 P         | Geo Environment                  | 4                           | -               | -               | 50           | 2              |
|                  | <b>TOTAL</b>                     | -                           | -               | -               | 600          | 24             |

**RESTRUCTURED CHOICE - BASED CREDIT SYSTEM DEPARTMENT OF  
ENVIRONMENTAL SCIENCE, OSMANIA UNIVERSITY**  
**(Effective from academic year 2015-2017)**

**SEMESTER - III**

| <b>THEROY</b> |  |             |                     |               |       |         |
|---------------|--|-------------|---------------------|---------------|-------|---------|
| Paper         | Title                                      | Instruction | Marks               |               |       | Credits |
|               |  | Hrs/Week    | Internal Assessment | Semester Exam | Total |         |
| ES -301 T     | Biodiversity and Conservation              | 4           | 20                  | 80            | 100   | 4       |
| ES -302 T     | Water Treatment and Solid Waste Management | 4           | 20                  | 80            | 100   | 4       |
| ES -303 T     | Remote Sensing and GIS                     | 4           | 20                  | 80            | 100   | 4       |
| ES -304 T     | Resource Management                        | 4           | 20                  | 80            | 100   | 4       |
|               | Seminar                                    | 2           | -                   | -             | 25    | 1       |

  

| <b>PRACTICALS</b> |  |   |   |   |     |    |
|-------------------|--|---|---|---|-----|----|
| ES -305 P         | Biodiversity and Conservation              | 4 | - | - | 50  | 2  |
| ES -306 P         | Water Treatment and Solid Waste Management | 4 | - | - | 50  | 2  |
| ES -307 P         | Remote Sensing and GIS                     | 4 | - | - | 50  | 2  |
| ES -308 P         | Resource Management                        | 4 | - | - | 50  | 2  |
|                   | Total                                      | - | - | - | 625 | 25 |

**SEMESTER – IV**

| <b>THEROY</b> |                                  |             |                     |               |       |         |
|---------------|----------------------------------|-------------|---------------------|---------------|-------|---------|
| Paper         | Title                            | Instruction | Marks               |               |       | Credits |
|               |                                  | Hrs/Week    | Internal Assessment | Semester Exam | Total |         |
| ES -401 T     | Environmental Biotechnology      | 4           | 20                  | 80            | 100   | 4       |
| ES -402 T     | Environmental Toxicology         | 4           | 20                  | 80            | 100   | 4       |
| ES -403 T     | Environmental Impact Assessment  | 4           | 20                  | 80            | 100   | 4       |
| ES-404 T      | Biofertilizers & Organic Farming | 4           | 20                  | 80            | 100   | 4       |
|               | Seminar                          | 2           | -                   | -             | 25    | 1       |

  

| <b>PRACTICALS</b> |                                 |   |   |   |     |      |
|-------------------|---------------------------------|---|---|---|-----|------|
| ES -404 P         | Environmental Biotechnology     | 4 | - | - | 50  | 2    |
| ES -405 P         | Environmental Toxicology        | 4 | - | - | 50  | 2    |
| ES -406 P         | Environmental Impact Assessment | 4 | - | - | 50  | 2    |
|                   | Project Work                    | 8 | - | - | 100 | 4    |
|                   | Total                           | - | - | - | 675 | 27   |
|                   | Grand Total Marks and Credits   |   |   |   |     | 2500 |
|                   |                                 |   |   |   |     | 100  |