

# SECOND SEMESTER 2023-24

# Course Handout Part II

Date: 09.01.2024

In addition to Part – I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course.

**Course No : BITS F225**

**Course Title : ENVIRONMENTAL STUDIES**

**Instructor-in-charge:** **SUPRATIM GHOSH**

# Instructors : Anmala Jagadeesh and Sourav Bag

1. **Scope of the course:**

A large part of formal education requirements ignores environment and related issues because it does not seem to have a tangible purpose. But over the years stakeholders of education have realized that this omission has led to exhibition of some very irresponsible practices on the very resources that have supported us and will continue to hopefully support us for future generations to come. Further, these practices have come with irrational justifications and most importantly finger pointing indicating that it is someone else’s responsibility to take care of nurturing the surroundings and resources. The scope of the course is to ignite a conversation, brainstorm, debate, share perspectives, ideas, suggestions, feasible methods etc. and try and implement a small part of it in our lives. The course has no claim to specific academics or disciplines, it is just life as we speak, it’s our planet, our homes, our family, our resources, our surroundings, our health, and our future.

1. **Objective of the course:**

The primary objective is to ensure that any student regardless of background or major turns out to be a well-rounded, environmentally, and culturally competent adult by the time they graduate. This would familiarize oneself prior to jumping into similar real-world issues that will occupy one’s time and attention significantly in the course of their lifetime. It is for both types of students, those who willingly take environmental studies courses and are already sold on the environmental movement and those who are apathetic and skeptical and shy away. Obviously, the course will be interdisciplinary and try to be interactive as much as possible. The bulk of the course will require student’s involvement in brainstorming and making your opinion and solutions heard in creative means such as, posters, multimedia, skits, field work, case studies, lab work, invited talks etc. The course is relevant for present and future and will be driven by students with an objective to create a helpful tradition and leave one’s mark.

1. **Textbook (TB):**

Bharucha, E., 2013. *Textbook for Environmental Studies for Undergraduate Courses.* 3rd Ed. Universities Press.

<https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf>

1. **Reference Book (RB):**
2. R., Rajagopalan, 2015, *Environmental Studies, from crisis to cure, 3rd edition, Oxford Education* (easily available on Amazon).

1. **Course Plan:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Lecture No.*** | ***Learning objectives*** | ***Topics to be covered*** | ***Unit /***  ***Chapter*** | ***Dept*** |
| 1 | Multidisciplinary nature of environmental studies | Definition, Scope and Importance, Need for Public Awareness, Institutions, and significant contribution of pioneers in environmental conservation. | 1-T |  |
| 2-5 | Concept of ecosystems and its features | Ecosystems: Types and Function  Food and ecological pyramids | 3-T | **BIO** |
| 6-9 | Human population and environment | Dynamics of natural populations  Human population growth and health,  Role of information Technology in Environment and human health. | 7-T |
| 10-13 | Biodiversity and its  conservation | Bio-diversity  Hot-spots of biodiversity  Threats to biodiversity,  Endangered Species  Conservation of biodiversity | 4-T |
| 13-20 | Natural resources and the impact of man-made  activities on them | Natural resources and associated problems in the same  Water resources  Mineral resources  Food resources  Energy resources  Land resources;  Role of an individual in conservation of natural resources | 2-T | **CHE** |
| 21 -27 | Environmental pollution | Definition, Cause, effects and control measures of Air pollution, Water pollution, Soil pollution, Noise pollution (thermal pollution and nuclear hazards)  Solid waste Management: Causes, effects and control measures of urban and industrial wastes, waste to energy concept; Case studies | 5-T |
| 28-34 | Role of an individual in prevention of pollution: Acts pertaining to Environment; Issues involved in enforcement of environmental legislation EIA, | **CIV** |
|  |  | Disaster management: floods, earthquake, cyclone and landslides. |  |  |
| 34-41 | Social issues and the environment | Unsustainable to Sustainable development, Urban problems related to energy.  Water conservation, rainwater harvesting, watershed management, resettlement and rehabilitation of people; its problems and concerns;  Environmental ethics: Issues and possible solutions, Wasteland reclamation, Consumerism and waste products,  Global issues like Climate change, nuclear accidents etc., public awareness, value education | 6-T |

1. **Evaluation scheme:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Evaluation component*** | ***Duration*** | ***%*** | ***Date and time*** | ***Nature of the Component\**** |
| **Mid Semester Examination** | 90 min | 25 | 13/03 - 11.00 - 12.30PM | OB |
| **Project Work/presentation/Activities** | Diverse | 35 | Continuous Evaluation | OB |
| **Comprehensive Examination** | 180 min | 40 | 11/05 FN | OB |

\*OB: Open book, CB: Closed book

1. **Chamber consultation hour**:

Tobe announced in the class.

1. **Grading policy**:

Award of grades will be guided in general by the histogram of marks.

1. **Make-up policy**:

Make-up for Mid semester examination will be given only in genuine (medical emergency) cases of absence. If the absence is anticipated, before the examination, prior permission of the Instructor-in-charge is necessary. Request for make-up should reach the instructor-in-charge at the earliest. Make-up for class tests/ quizzes and assignments are not given. Also refer to Clause 4.07 of BITS *Academic Regulations* for more details.

1. **Notices**:

All notices/ announcements regarding this course shall be displayed in Course Management System (CMS).

1. **Academic Honesty and Integrity Policy**: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Instructor In-charge**

**BITS F225**