



# **Birla Institute of Technology & Science, Pilani**

Hyderabad Campus

## **FIRST SEMESTER 2023-2024**

### Course Handout Part II

Date: 11-08-2023

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

<b>Course No</b>	<b>:</b>	<b>BITS F225</b>
<b>Course Title</b>	<b>:</b>	<b>ENVIRONMENTAL STUDIES</b>
<b>Instructor-in-charge</b>	<b>:</b>	<b>A VASAN</b>
<b>Instructors</b>	<b>:</b>	<b>Amartya Sanyal and Nilanjan Dey</b>

### **1. Scope and Objective of the Course:**

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 primary objective is to ensure that any student regardless of the program they are admitted to, turns out to be a well-rounded, environmentally and culturally competent adult by the time they graduate. This would familiarize oneself prior to stepping into similar real-world issues that will occupy one's time and attention significantly in the course of their lifetime. The course will be interdisciplinary and will require student's involvement in brainstorming and making your opinion and solutions heard in creative means such as posters, presentations, field work, case studies, lab work etc. The course aims one to create a better world while we tune our lifestyle towards a sustainable living.

### **2. Textbook (TB):**

Erach Bharucha, *Textbook of Environmental Studies for Undergraduate Courses*, Third Edition, Orient Black Swan Pvt Limited, India, 2021.

### **3. Reference Book (RB):**

R., Rajagopalan, 2015, *Environmental Studies, from crisis to cure*, 3<sup>rd</sup> edition, Oxford Education.

### **4. Course Plan:**

<b>Lecture No.</b>	<b>Learning objectives</b>	<b>Topics to be covered</b>	<b>Chapter in the Text Book</b>
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
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
10-14	Biodiversity and its conservation	Bio-diversity, Hot-spots of biodiversity, Threats to biodiversity, Endangered Species Conservation of biodiversity	4-T
15-20	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
21-28	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
29-34		Role of an individual in prevention of pollution: Acts pertaining to Environment; Issues involved in enforcement of environmental legislation EIA  Disaster management: floods, earthquake, cyclone and landslides.	
35-42	Social issues and the environment	Unsustainable to Sustainable development, Urban problems related to energy. Water conservation, rainwater harvesting, watershed management, resettlement and	6-T

<b>Lecture No.</b>	<b>Learning objectives</b>	<b>Topics to be covered</b>	<b>Chapter in the Text Book</b>
		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	

### 5. Evaluation Scheme:

<b>Evaluation component</b>	<b>Duration</b>	<b>Weightage (%)</b>	<b>Date and time</b>	<b>Nature of the Component</b>
Mid Semester Exam	90 min	25	12/10 - 4.00 - 5.30PM	OB
Project Work (2 Reviews)	-	25	-	OB
Presentations (3 Nos)	-	15	-	OB
Comprehensive Examination	180 min	35	15/12 AN	CB

**6. Chamber Consultation Hour:** To be announced later in the Lecture Class

**7. Notices:** Notices concerning this course will be displayed on Google Classroom Course page.

**8. Make-up Policy:** Prior permission for all make ups are a must.

**9. 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**