Birla Institute of Technology & Science, Pilani
Hyderabad Campus

SECOND SEMESTER 2021-22
Course Handout Part II

Date: 15.01.2022

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 : **Jagadeesh Anmala**

Instructor : **D Purnima and Piyush Khandelia**

1. Scope of the course:

A large part of formal education requirements ignore 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.

2. 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 also 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.

3. Text book (TB):

Bharucha, E., 2013. *Textbook for Environmental Studies for Undergraduate Courses.* 2nd Ed. Universities Press.
https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf

4. Reference Book (RB):

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

5. Course Plan:

Lecture No.	*Learning objectives*	*Topics to be covered*	*Chapter in the Text Book*	*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-T1,	
2-5	Concept of ecosystems and its features	Ecosystems: Types and Function Food and ecological pyramids	3-T1,	**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-T1;	
10-14	Biodiversity and its conservation	Bio-diversity Hot-spots of biodiversity Threats to biodiversity, Endangered Species Conservation of biodiversity	4-T1;	
15-21	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-T1,	**CHE**
22 -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-T1;	
29-35		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.		**CIV**
36-42	Social issues and the environment	Unsustainable to Sustainable development, Urban problems related to energy; Water conservation, rain water harvesting, watershed management, resettlement and rehabilitation of people; its problems and concerns; Environmental ethics: Issues and possible solutions, Wasteland reclamation, Consumerism and waste products,	6-T1	

		Global issues like Climate change, nuclear accidents etc., public awareness, value education		

6. Evaluation scheme:

Evaluation component	*Duration*	*Weightage %*	*Date and time*	*Nature of the Component**
Mid Semester Examination	90 min	25	14/03 1.30pm to3.00pm	OB
Project Work/Activities	Diverse	35	Continuous Evaluation	NA
Comprehensive Examination	120 min	40	13/05 AN	OB

*OB: Open book, CB: Closed book

7. Chamber consultation hour:

To be announced in the class.

8. Grading policy:

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

9. 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.

10. Notices:

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

11. 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.

Jagadeesh Anmala
Instructor In-charge