

Earth and Environmental Sciences (ESI 101)
I B Tech Common (2021–2022 Winter Semester.)

LECTURE PLAN

S. No	Topics	Expected Lecture Hours	Faculty
1	Greenhouse effect, Ozone depletion and acid rain, and climate change, sources of GHG, climate change science, Stability of the atmosphere, air pollutants.	3	MP
2	The atmosphere energy balance and Global atmospheric circulation, Origin, structure and composition of atmosphere,	2	SI
3	Environmental problems of urban areas air and air pollution due to vehicles, and fire crackers.	1	SI
4	How ecosystems work, Ecosystems and evolution, human population change and the environment, Environmental resistance and carrying capacity.	2	VH
5	Freshwater resources and water pollution and mineral and soil resources.	1	VH
6	Human use of Earth, sustainable consumption, environmental justice and ethics, an overall plan for sustainable living.	1	TP
7	Environmental pollution caused by power plants, open burning of solid wastes	2	TP
Grand Total		12	

Text Book:

1. Berg, L. R., Hager, M. C., & Hassenzahl, D. M. (2011). Visualizing environmental science. Wiley.
2. Introduction to environmental engineering (5th edition) by Mackenzie L Davis and David A Cornwell (2014). Mc Graw Hill publishers.

Reference books

1. Introduction to Atmospheric Chemistry, by Daniel J. Jacob, Princeton University Press, 1999.
2. First principles of meteorology and air pollution by Mihalis Lazaridis (2010). Springer