

Environmental Studies

1.1 Course Code: CH406

1.2 Contact Hours: 2-0-0 Credits: 06

1.3 Semester-offered: 4th Year- even

1.4 Prerequisite: NA

1.5 Syllabus Committee Members: Dr. K.G. Biswas and Dr. Milan Kumar

2. Objective:

A course on Environmental Studies is offered with the intention of imparting an understanding of the impact of technological solutions in societal and environmental contexts, and to enable the students to demonstrate the knowledge of and need for sustainable development. Basic topics such as natural resources, ecology, biodiversity, and environmental issue are dealt in detail in this course.

3. Course Content:

Unit wise distribution of content and number of lectures

Unit	Topics	Sub-topics	Lectures
1	Introduction to Environmental Studies	Definition, scope and importance, Components of the environment and their interactions, Impacts of development on the Environment, Environmental systems, Connections, Cycles, Flows, Feedback loops, Renewable and non-renewable resources, Sustainable development, Ecosystems, Biodiversity and its conservation.	8
2	Social Issues and Environment: water and air	Concept of sustainable development, Energy resources and uses, Urban problems related to energy, Water conservation, Wasteland reclamation, Resettlement and rehabilitation, Air pollution and the Biosphere	7
3	Environmental Pollution	Environmental impact assessment, Climate changes, Consumerism and waste products, Soil pollution, Solid and hazardous waste management, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards	8
4	Global Issues and Environment	Global Issues: Climate change, global warming, acid rain, ozone layer depletion, Kyoto mechanisms	5
Total			28

4. **Readings:**

4.1 Text books

1. Cunningham WP and Cunningham MA, Principles of Environmental Science, 6th Ed., Tata McGraw-Hill Publishing Company, 2011.
2. Joseph B, Environmental Studies, 3rd Ed., Tata McGraw-Hill Publishing Company, 2017.
3. Chawla S, A Textbook of Environmental Studies, Tata McGraw Hill Education Private Limited, 2012.

4.2 Reference Books

1. Jackson, ARW and Jackson JM, Environmental Sciences: The Environment and Human Impact, Longman Publishers, 1996.
2. Nathanson JA, Basic Environmental Technology, Prentice Hall of India, New Delhi, 2002.
3. Dasgupta P and Maler G (eds.), The Environment and Emerging Development Issues, Vol. I, Oxford University Press, New Delhi, 1997.
4. Redclift M and Woodgate G (eds.), International Handbook of Environmental Sociology, Edward Edgar, 1997.
5. Kaushik A and Kaushik CP, Perspective in Environmental Studies, New Age International Limited, 2004

5. **Outcome of the Course:**

After completion of this course, the student will be able to

- Discover knowledge in ecological perspective and value of environment!
- Understand the significance of various natural resources and its management.
- Analyze global environmental problems and come out with best possible solutions.