

**CURRICULUM AND CREDIT FRAMEWORK FOR  
UNDERGRADUATE PROGRAMMES**

Syllabus for

Department of Environmental Science

Nagaland University

**2025**

## MULTIDISCIPLINARY COURSES

Course code	Title	Credit	Semester
MD-1	Environmental Studies	3	1

## **MULTIDISCIPLINARY COURSE: ENVIRONMENTAL STUDIES**

### **Unit 1. Humans and the Environment:**

The man-environment interaction: Humans as hunter-gatherers; Origin of agriculture; Great ancient civilizations and the environment; Industrial revolution and its impact on the environment;; UN Conference on Human Environment 1972; Rio Summit and subsequent international efforts.

Classification of natural resources, Water resources: Types, Availability, Environmental impact of over-exploitation, Conflicts over water; Soil and mineral resources; Energy resources: Sources, classification, Sustainable Development Goals (SDGs).

### **Unit 2. Environmental Issues and challenges:**

Environmental issues and scales; Environmental Pollution: types, sources, effects, control;; Biodiversity loss; Climate change. Disasters – Natural and Man-made; Biodiversity in India and the world; Biodiversity hotspots; Ecosystems and ecosystem services, climate change. Major conservation policies; Major protected areas; the role of traditional knowledge

Anthropogenic climate change from greenhouse gas emissions; Projections of global climate change with special reference to temperature, rainfall, climate variability and extreme events; Importance of 1.5 °C and 2.0 °C limits to global warming

### **Unit 3. Environmental Management, Laws and treaties:**

Indian Constitutional provisions- Article 48A, Article 51 A(g) and Life cycle analysis, Cost-benefit analysis, concept of EIA.

Major Indian Environmental Legislations: The Wild Life (Protection) Act, 1972; The Water (Prevention and Control of Pollution) Act, 1974; The Forest (Conservation) Act, 1980; The Air (Prevention and Control of Pollution) Act, 1981; The Environment (Protection) Act, 1986; The Biological Diversity Act, 2002;

Introduction to International Environmental laws and Agreements: Convention on Biological Diversity (CBD); Ramsar Convention on Wetlands of International Importance; United Nations Convention to Combat Desertification (UNCCD); Vienna Convention; Montreal Protocol; Kigali Amendment; Basel Convention; United Nations Framework Convention on Climate Change (UNFCCC); Kyoto Protocol; Paris Agreement;

### **Field Work**

- Field visits to identify local/regional environmental issues and make observations including data collection and preparation of a brief report.
- Environmental management activities within the campus such as solid waste management, water Management and sanitation, and sewage treatment.

**Suggested Readings:**

1. Bharucha Erach , 2021. Text Book of Environmental Studies. University Press (India) Pvt. Ltd.
2. Bharucha Erach, 2006. The Biodiversity of India, Mapin Publishing Pvt. Ltd, Ahmedabad –380013,
3. Santra S.C, 2022.Environmental Science, New Central Agency Pvt Ltd. Kolkata, India.
4. Kaushik, Anubha & Kaushik, C.P, 2018. Perspectives in Environmental Studies, New Age International (P) Ltd. Publisher, New Delhi.
5. Singh Savindra, 2022. Environmental Geography, Prayag Pustak Bhawan, Allahabad.