



Cooch Behar Panchanan Barma University

DRAFT SYLLABUS ON ENVIRONMENTAL STUDIES FOR UNDER GRADUATE COURSES OF ALL BRANCHES (Arts, Science & Commerce)

- Unit 1: Basic of environmental Studies** **(5 lectures)**
 Definition, Nature, Scope and Importance; Components of environment: Environmental education.
- Unit 2: Natural Resources: Renewable and non- renewable resources** **(10 lectures)**
 Nature and Natural resources their conservation and associated problems:
- Forest resources: Uses, types and importance, Joint Forest Management & Tribal population, Deforestation and its effects.
 - Water resources: Distribution of water on Earth: Use, Over exploitation of surface and ground water; Dams: benefits and problems; Flood & drought.
 - Mineral resources: Mineral resources in India, Use and exploitation, Social impacts of mining.
 - Food resources: World food problems and food insecurities.
 - Energy resources: Renewable and Nonrenewable energy sources, use of alternate energy sources, Case studies.
 - Land resources: Land as a resource; Land degradation, Landslides, Soil erosion and Desertification.
 - Use of resources for sustainable development.
- Unit 3: Ecology and Ecosystems** **(8 lectures)**
 Concept of ecology, Population ecology, Community ecology
- Concept of an ecosystem; different types of ecosystem.
 - Food chains, food webs and ecological succession.
 - Energy flow in the ecosystem, energy flow models.
- Unit 4: Biodiversity and its conservation** **(8 lectures)**
- Biodiversity: Levels of biological diversity.
 - Values of biodiversity.
 - Hot-Spots of biodiversity, Mega-biodiversity countries.
 - Threat to biodiversity.
 - Threatened and endemic species of India.
 - Conservation of biodiversity (*In-situ* and *Ex-situ*).
 - Ecosystem service: Ecological, Economical, Social, Ethical, aesthetical and informational values.

Unit 5: Environmental Pollution & Management (8 lectures)

(a) Nature, Causes, Effects and Control measures of --

- (i) Air pollution ii) Water pollution iii) Soil pollution
iv) Noise Pollution v) Nuclear Hazards

(b) Fireworks Pollution: Definition, Composition/Ingredients, Effects, Monitoring strategies

- Solid waste management: Causes, effects and disposal methods; Management of biomedical and municipal solid wastes.
- Disaster management: Floods, Earthquake, Cyclone and Landslides

Unit 6: Environmental policies and practices (10 lectures)

- Climate change, Global warming, ENSO, Acid rain, Ozone layer depletion; Montreal and Kyoto Protocols
- Constitutional Provisions for protecting environment- Articles 48(A), 51 A (g)
- Environmental Laws: The Environment (Protection) Act, 1986, The Air (Prevention and Control of Pollution) Act, 1981; The Water (Prevention and Control of Pollution) Act 1974; and Forest (Conservation) Act, 1980.
- The wildlife Protection Act, 1972.

Unit 7: Human Communities and the Environment (6 lectures)

- Human population growth; impacts on environment.
- Population explosion – Family Welfare Programme
- Environment and human health: Concept of health & disease, Examples of common communicable & non- communicable diseases, Public awareness.
- Environment movements in India: Chipko Movements, Silent Valley Movement, Movements in Karnataka.

Unit 8: Field Work Report / Project Report / term paper (Based on any one of the following topics and to be evaluated by internal teachers only) (5 lectures)

- Environmental assets--- River/Forest/Grassland/Hill/Mountain etc.
- Environmental pollution – Urban/ Rural / Industrial / Agricultural
- Study of common Plants/Insect /Birds / Wild life etc.
- Study of simple ecosystems: Pond / River / Hill slope, etc.
- Municipal Solid Waste management and handling.

This is to inform all concern Teachers and students that the Field Work Project for ENVIRONMENTAL STUDIES will prepared with the help of following guideline

Title of the project:

“Study of common Plants/Insect /Birds / Wild life in our Cooch Behar College Campus and Surrounding Area”

Content of Field Report

- 1) Title page
- 2) Acknowledgement
- 3) Contents
- 4) Introduction
- 5) Location of the Study Area
- 6) Objectives
- 7) Chapter- 7 (As per Course Curriculum)
- 8) Conclusion
- 9) Bibliography

Total No of pages- 20 (including Maps, Diagrams, Tables, Figures and Photographs)

Paper Size- A4

Paper Orientation- Portrait

The Field Report will be submitted in a Channel File