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Department Of Science

Lesson Plan (Session 2025-2026)

Class: B.SC (Life science) Semester: **I**

Name of the Course: Environmental Studies Course Code: B23-VAC-201

Dates: 22 July, 2025 – 24 Nov., 2025

SYLLABUS

Maximum Marks: 100 Time: 3 hours

End Term Exam Marks: 50(T)+20(P)=70 Marks Assessment: 20(T)+10(P)=30 Marks

Note: Examiner will be required to set nine questions in all. First question will be compulsory, consisting of short type question covering the entire syllabus in addition to that eight more questions will be set, two question from each unit. Students will be required to attempt in all. In addition to the compulsory question, student will have to attempt four more questions selecting one question from each unit.

Unit	Topics	Contact Hours
Unit: I	Introduction to environmental studies: Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development. Ecosystems: Definition, structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs, Major ecosystems types: Forest ecosystem, Grassland ecosystem, Desert ecosystem and Aquatic ecosystem (lakes, rivers, oceans).	06
Unit: II	Natural resources: Renewable and Non- renewable Resources Land resources: Land degradation and soil erosion. Forest resources: Importance of forests, deforestation: causes and impacts on environment. Water resources: Use and over- exploitation of surface and ground water. Energy resources: Renewable and non- renewable energy sources. Biodiversity and Conservation: Definition and its types, Endangered and endemic species of India. Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation o biodiversity: In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and informational values.	09
Unit: III	Environmental pollution Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution. Solid waste management: Sources, methods of disposal: Landfill, incineration and composting. Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture. Environmental Policies & Practices Environmental laws: Environment (Protection) Act, 1986, Air (Prevention & Control of Pollution) Act, 1981, Water (Prevention and control of Pollution) Act, 1974	08
Unit: IV	Human Communities and the Environment: Human population growth: Impacts on environment, human health and welfare. Resettlement and rehabilitation of project affected person. Disaster management: floods, earthquake, cyclones, landslides and drought. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.	07
V	Introduction to environmental studies: Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development. Ecosystems: Definition, structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs, Major ecosystems types: Forest ecosystem, Grassland ecosystem, Desert ecosystem and Aquatic ecosystem (lakes, rivers, oceans).	06

Text Books :

1. Singh, R.P. & Islam, Z. 2012. Environmental Studies. Concept Publishing Company..

Course Outcomes

After completing this course, the learner will be able to:

1. Understand the concept of environmental studies, sustainable development and ecosystem.
2. Learn about the various natural resources and about biodiversity and its conservation.
3. Know about the types of pollution, solid waste management, global environmental issues and environmental laws.
4. Understand the concept of population growth and its impacts on environment and disaster management..

Lesson Plan

SR. No	Date	Theory (4)
1	22 July -25July 2025	Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development.
2	28 July - 2 August	Definition, structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs.
3	4 August -8 August	Major ecosystems types: Forest ecosystem, Grassland ecosystem, Desert ecosystem and Aquatic ecosystem (lakes, rivers, oceans).
4	11 August - 14 August	Land resources: Land degradation and soil erosion. Forest resources: Importance of forests, deforestation: causes and impacts on environment.
5	18 August - 23August	Water resources: Use and over- exploitation of surface and ground water. Energy resources: Renewable and non- renewable energy sources.
6	25 August -30 August	Definition and its types, Endangered and endemic species of India. Threats to biodiversity: Habitat loss, poaching of wildlife.
7	1 Sept. - 6 Sept.	Community Ecology: Nature of communities; community structure and attributes
8	8 Sept. - 13 Sept.	Levels of species diversity and its measurement; edges and ecotones.
9	15 Sept. - 20 Sept.	Ecosystem: structure and function; energy flow and mineral cycling (C,N,P); primary production and decomposition
10	22 Sept. - 27 Sept.	structure and function of some Indian ecosystems: terrestrial and aquatic.
11	29 Sept.- 4 Oct.	Ecological Successions: Types; mechanisms; changes involved in succession; concept of climax
12	6 Oct.- 11 Oct.	Applied Ecology and Conservation Biology: Environmental pollution
13	13 Oct.- 18 Oct.	Biodiversity: status, monitoring and documentation
14	27 Oct. - 1 Nov.	Biodiversity management approaches
15	3 Nov. - 8Nov	Principles of conservation and it’s management
16	10 Nov-15 Nov	Project Tiger
17	17 Nov -22 Nov	Biosphere reserves
18	24 Nov.	Revision

Signature of Teacher **Head of Department**