

Semester Lecture Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim Goa

Name of Faculty: Mr. Stephen Fernandes

Subject: VAC Environmental Studies I

Paper code: VAC100

Program/Course: FYBSc

Division: A

Academic year: 2025- 2026

Semester: I

Total Lectures: 30

Course Objectives:

The Course aims to:

- Familiarise the Students with the multidisciplinary nature of environmental studies and Natural Resources.
- Impart Knowledge of Ecosystems, Biodiversity and its conservation.

Student Learning Outcome:

- Define and explain various concepts in Environmental Studies.
- Discuss Global Environmental Issues and their impact on Environment and Humans.
- Apply various environmental concepts in improving the quality of environment and promoting sustainable development.
- Develop values and attitude in addressing environmental issues at a personal and community level

Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Exercises/ Assignment	ICT Tools	Reference books
June	23/06/2025	28/06/2025	02	1) The Multi-Disciplinary Nature of Environmental Studies and Natural Resources	Discussion on different disciplines in Environmental Studies	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier

June	30/06/2025	05/07/2025	02	Definition, Scope and Importance; Need for public awareness	Discussion on different disciplines in Environmental Studies	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
July	07/07/2025	12/07/2025	02	2) Natural Resources a) Forest Resources: use and over- exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people .	1) Classifying various natural resources 2. List out important Forest Products used in day to day life	Power point presentation, White Board Youtube Videos	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
July	14/07/2025	19/07/2025	02	b) Water Resources: use and over- exploitation of surface and ground water; floods, droughts, conflicts over water, dams-benefits and problems.	Understanding the uses of resources and importance	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
July	21/07/2025	26/07/2025	02	c) Mineral Resources: use and exploitation, environmental effects of extracting and using mineral resources; case studies related to mining and its effect on siltation and loss of biodiversity	Mining in Goa and its impacts on Environment	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
July	28/07/2025	02/08/2025	02	d) Food Resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity; case studies	Case study of Endosulfan pesticide tragedy in Kerala.	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
August	04/08/2025	09/08/2025	02	d) Energy Resources: growing energy needs, renewable and non-renewable energy sources, use of alternative energy sources, case studies.	Renewable Energy Production in Goa	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of

							Environmental Studies by Mahua Basu, S. Xavier
August	11/08/2025	16/08/2025	01	f) Land Resources: land as a resource, land degradation, man-induced landslides, coastal erosion, soil erosion and desertification	Evaluate various impacts of over-exploitation of resources on environment	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
August	18/08/2025	25/08/2025	02	g) Role of an individual in conservation of natural resources Equitable use of resources for sustainable lifestyles	Create awareness among people for conservation and sustainable utilization of resources	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
September	01/09/2025	06/09/2025	02	Unit 2: Ecosystems and Biodiversity and its Conservation Concept of an ecosystem, structure and functions of ecosystems; producers, consumers and decomposers, energy flow in the ecosystem	Explaining the various concepts of ecology/ecosystems	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
September	08/09/2025	13/09/2025	02	Ecological succession, food chains, food webs and ecological pyramids.	Explaining the various concepts of ecology/ecosystems.	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
September	15/09/2025	20/09/2025	02	Introduction, types, features, structure and functions of the following ecosystems: forest ecosystem, Grassland ecosystem, Desert ecosystem.	List out different ecosystems on the planet earth	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
September	22/09/2025	27/09/2025	02	Aquatic ecosystem (ponds, streams, lakes, rivers, oceans, coastal zone, estuaries)	Draw the biotic structure of Lake	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier

October	29/09/2025	04/10/2025	01	Biodiversity and its Conservation Introduction, definition, genetic, species and ecosystem diversity; bio-geographical classification of India Value of biodiversity consumptive use, productive use, social, ethical, aesthetic and option values	Describe the concept of biodiversity, its types and values List down various biodiversity products we use in our day to day lives.	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
October	06/10/2025	11/10/2025	02	Biodiversity at global, national, regional and local levels; India as a mega-diversity nation hotspots of biodiversity	Describe Biodiversity at different Levels	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
October	13/10/2025	18/10/2025	02	Threats to biodiversity - habitat loss, poaching of wildlife, man-wildlife conflicts, bio-invasion, and over exploitation Endangered and endemic species of India (at least 5 examples of animals and plants each) Conservation of biodiversity- in-situ and ex-situ conservation	Discuss various threats related to Biodiversity. Write a detailed Note on Protected Area Network in Goa	Power point presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier

Assessment Rubrics

Component	Max Marks
ISA 1	05
ISA 2	05
ISA 3	05
Semester End Exam	40