

Semester Lecture Plan

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

Name of Faculty: Enoch Abraham

Subject: VAC (Environmental Studies -I)

Paper code: VAC100

Program/Course: FYBsc

Division: A

Academic year: 2026- 2027

Semester: I

Total Lectures: 23

Course Objectives:

The Course aims to:

- Familiarize 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
July	20/07/2026	25/07/2026	02	Natural Resources a) Forest Resources: use and overexploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.	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

				b) Water Resources: use and overexploitation of surface and ground water; floods, droughts, conflicts over water, dams-benefits and problems.	Understanding the uses of resources and importance		
July	27/07/2026	01/08/2026	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 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	03/08/2026	08/08/2026	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	10/08/2026	15/08/2026	02	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	17/08/2026	22/08/2026	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	24/08/2026	29/08/2026	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	31/08/2026	05/09/2026	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	07/09/2026	12/09/2026	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	21/09/2026	26/09/2026	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	28/09/2026	03/10/2026	02	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	05/10/2026	10/10/2026	02	Biodiversity at global, national, regional and local levels; India as a mega-diversity nation hotspot 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	12/10/2026	14/10/2026	01	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

