

## Lecture Plan

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

**Name of Faculty:** Mr. Stephen Fernandes

**Subject:** Environmental Studies (VAC)

**Paper code:**VAC100

**Program:** F.Y.B.Com

**Division:** B

**Academic year:** 2024 - 2025

**Semester:** I

**Total Lectures:** 30

### Course Objectives:

The Course aims to:

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

### Expected Course Outcome:

The Course aims to:

- a. Familiarise the Students with the multidisciplinary nature of environmental studies and Natural Resources.
- b. 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	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
	01-07-2024	06-07-2024	02	1) The Multi-Disciplinary Nature of Environmental Studies and Natural Resources	Discussion on different disciplines in Environmental Studies	Power point presentation , YouTube Videos, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
	08-07-2024	13-07-2024	02	Definition, Scope and Importance; Need for public awareness 2) Natural Resources a) Forest Resources: use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and	1) Classifying various natural resources	Power point presentation , YouTube Videos, White Board	Textbook of Environmental Studies: E. Bharucha Fundamentals of Environmental Studies by Mahua Basu, S. Xavier

July			tribal people				
	15-07-2024	20-07-2024	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
	22-07-2024	27-07-2024	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
	29-07-2024	03-08-2024	02	d) Food Resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-	Case study of Endosulfan pesticide tragedy in	Power Point Presentation,	Textbook of Environmental Studies: E. Bharucha,

				pesticide problems, water logging, salinity; case studies	Kerala.	White Board	Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
	05-08-2024	10-08-2024	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	12-08-2024	17-08-2024	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
	19-08-2024	24-08-2024	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
	26-08-2024	31-08-2024	02	<b>Unit 2: Ecosystems and Biodiversity and its Conservation</b> Concept of an ecosystem, structure and functions of ecosystems; producers, consumers and decomposers, energy flow in the ecosystem	Explaining the various concepts of ecology/ecosys	Power Point Presentation, White Board	Textbook of Environmental Studies: E. Bharucha,  Fundamentals of

					tems.		Environmental Studies by Mahua Basu, S. Xavier
	02-09-2024	05-09-2024	02	Ecological succession, food chains, food webs and ecological pyramids.	Ecosystems of Goa	Power Point Presentation, White Board	Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier
September	16-09-2024	21-09-2024	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
	23-09-2024	28-09-2024	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
	30-09-2024	05-10-2024	02	<p><b>Biodiversity and its Conservation</b> 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</p>	<p>Describe the concept of biodiversity, its types and values</p> <p>List down various biodiversity products we use in our day to day lives.</p>	<p>Power Point Presentation, White Board</p>	<p>Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier</p>
	07-10-2024	12-10-2024	02	<p>Biodiversity at global, national, regional and local levels; India as a mega-diversity nation hotspots of biodiversity</p>	<p>Describe Biodiversity at different Levels</p>	<p>Power Point Presentation, White Board</p>	<p>Textbook of Environmental Studies: E. Bharucha, Fundamentals of Environmental Studies by Mahua Basu, S. Xavier</p>

				Threats to biodiversity - habitat loss, poaching of wildlife, man-wildlife conflicts, bio-invasion, and over exploitation			
October	14-10-2024	19-10-2024	02	Endangered and endemic species of India (at least 5 examples of animals and plants each)	Discuss various threats related to Biodiversity.	Power Point Presentation, White Board	Textbook of Environmental Studies: E. Bharucha,
	21-10-2024	22-10-2024	01	Conservation of biodiversity- in-situ and ex-situ conservation	Protected Area Network in Goa: Mapping	Youtube Videos	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