



# V.V.VANNIAPERUMAL COLLEGE FOR WOMEN

(Belonging to Virudhunagar Hindu Nadars)

An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai

Reaccredited with 'A++' Grade (4<sup>th</sup> Cycle) by NAAC

**VIRUDHUNAGAR**

**Quality Education with Wisdom and Values**

## ENVIRONMENTAL STUDIES (for those who join in 2023-2024)

Semester III & IV	ENVIRONMENTAL STUDIES	Hours/Week: Semester III: 1 Semester IV: 1	
PART IV		Credits: 2	
Course Code 23UGES41		Internal 100	External -

### Outcomes of the Course completion

On completion of the course, students will be able to

- CO1 identify the different kinds of ecosystems and associated biotic and abiotic components. [K1]
- CO2 understand the importance and functions of ecosystems and their needs for the sustenance of human beings and sustainable environment. [K1]
- CO3 describe the cause, effect and preventive measures of environmental degradation. [K2]
- CO4 explain the preservation and conservation of natural resources along with the environment to meet the demand for future generation. [K2]
- CO5 apply the knowledge in solving the environmental problems of global issues. [K3]

### UNIT I

#### INTRODUCTION AND COMPONENTS OF ENVIRONMENT

Importance of Environmental Studies - Scope - Multidisciplinary Approach for Environmental Studies - Components of Environment - Structure of Ecosystem - Pond Ecosystem - Functions of Ecosystem - Food Chain and Food Web - Role of Individual in Conservation of Ecosystem. (6 Hours)

### UNIT II

#### BIODIVERSITY AND CONSERVATION

Introduction – Types - Values of Biodiversity - India as a Mega Diversity Nation, Hotspots in India – Western Ghats - Biosphere Reserve in India – Gulf of Mannar Marine Biosphere Reserve

- Threats to Biodiversity – Man and Wildlife conflicts - Biological Invasions - Conservation of Biodiversity – Sacred groves - National Parks and Sanctuaries - Biological Diversity Protection Acts. (6 Hours)

### **UNIT III**

#### **NATURAL RESOURCES AND CONSERVATION**

Introduction - Types - Forest Resources - uses – Threats – Deforestation - Conservation and Management – Afforestation Programme - Water Resources - Conflicts over Water, Rain Water Harvesting - Energy Resources - Renewable Energy Resource - Solar Energy - Non Renewable Energy - fossil fuels - Role of Individual in conservation of energy resources.

(6 Hours)

### **UNIT IV**

#### **POLLUTION AND MANAGEMENT**

Definition – Types - Causes of Pollution - Effects of Pollution – Global Warming - Green House Effect - Minamata Disease - Bombay High Oil Slick – Microplastics - Prevention and Control of Pollution - Role of Individual in Control of Pollution. (6 Hours)

### **UNIT V**

#### **ENVIRONMENTAL SUSTAINABILITY**

Introduction - Concepts of Sustainable Development - Brundtland Commission - Environmental Protection - Economic Growth and Social Equity - Threats to Sustainable Development - Ecocity and Ecotourism - Role of MoEF&CC - Role of Individual in Environmental Sustainability – The Environmental Protection Act (1986). Sustainable Developmental Goals (SDGs). (6 Hours)

### **TEXT BOOK**

Tamilselvi, M., Sreebha, R., and Aruna Devi, A. (2024). Textbook of Environmental Studies, (in Press).

### **REFERENCE BOOKS**

1. Erach Bharucha (2021). Textbook of Environmental Studies for Undergraduate Courses, 3<sup>rd</sup> Edition, Universities Press (India) Pvt.Ltd., Hyderabad-500 029, 266p.
2. Reeta Khosla and Zahid H.Siddiqui (2017). Basics of Environmental Studies, Narosha Publishing House Pvt.Ltd., New Delhi, 240p.

3. Anuj Kumar Rana and Manoj Kumar Rana (2015). Environment and Ecology: A Scientific Approach, second edition, Global Academic Publishers & Distributers, New Delhi 110002, pp319.
4. Pandey S.N., and S.P. Misra (2011). Environement and Ecology, Ane Books Pvt.Ltd., New Delhi, 718p.
5. Arumugam N., and Kumaresan (2005), Environmental Studies, First Edition, Saras Publications, Nagercoil, 436p.

Course Code 23UGES41	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	3	3	3	1	-	3
CO2	3	3	3	3	1	-	3
CO3	3	3	3	3	1	-	3
CO4	3	3	3	3	1	3	3
CO5	3	3	3	3	1	3	3
<b>Strong - 3</b>		<b>Medium – 2</b>			<b>Low – 1</b>		

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