

E.M.G. YADAVA WOMENS COLLEGE, MADURAI -14.**(An Autonomous Institution – Affiliated to Madurai Kamaraj University)****(Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC****CBCS with OBE****ENVIRONMENTAL STUDIES - UG****(w.e.f. 2022 – 2023 Batch onwards)**

Class : ALL III UG								
Sem	Course Type	Course Code	Course Title	Credits	Contact Hours / Week	CIA	SE	Total
I	Part - V	22OU5EV5	Environmental Studies	2	2	25	75	100

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Nature of the Course		
Knowledge and Skill Oriented	Employability Oriented	Entrepreneurship oriented
✓		

Course Objectives:

1. To sensitize on the environmental issues.
2. To educate on the significance of conserving natural resources.
3. To explore the structure and function of various types of ecosystems.
4. To emphasize biodiversity and its importance.
5. To address environmental ethics and social responsibility.

Unit I: Natural Resources:- Water Renewable Resources and watershed management– Forest Resources, management and conservation - Soil Resources and conservation- Food Resources – Energy Resources – Non-renewable resources and conservation of energy.

Unit II: Ecosystem:- Structure of an Ecosystem, Abiotic Components – Biotic Components – Functional Components – Food Chain – Energy Flow – Biogeochemical Cycles – Types of Ecosystems – Types of Aquatic Ecosystem – Pond Ecosystem – Grassland Ecosystem – Desert Ecosystem.

Unit III: Biodiversity and Conservation: - What is Biodiversity – Levels of Biodiversity – Values of Biodiversity – Consumptive use value – Social benefits – Cultural Values – India as a Mega Diversity Nation – Conservation and its significance.

Unit IV: Pollution: - Types of Pollutants – Types of Pollution - Air Pollution -Water Pollution - Thermal Pollution – Marine Pollution – Soil Pollution, Noise Pollution – Radiation Pollution. Solid waste and consumerism, effects of soil pollution, solid waste management – Control Measures.

Unit V: Environmental Ethics and Social Issues:- Attitudes of Major Religions towards the Environment – Human Population and Environment – Globalization and the Environment – Global Environmental Issues – Information Technology and the Environment, Alternative Lifestyles – Role of Individuals, Organizations and Government in protecting the Environment.

Book for Study:

1. Board of Editors. *Essentials of Environmental Education*. Centre for Environmental Studies, Lady Doak College, Madurai, 2014.

Books for Reference:

1. Chawla, P.S. *Disaster How to Avoid Harm*. New Delhi, Pearl Books Publications, 2008.
2. Dhar, D. N., Vaish, T.Kumar. *Environmental Science & Ethics*. New Delhi, Vayu Education of India, 2009.
3. Mackenzie.A., Bsl, A.S. and Virdee, S.R. *Instant notes in Ecology*. New York, Taylor and Francis, 2010.
4. Misra, S.P., and Pandey, S.N. *Essential Environmental Studies*. New Delhi, India, 2010.

Web Resources:

<https://www.ugc.gov.in/oldpdf/modelcurriculum/env.pdf>

[https://ncert.nic.in/pdf/syllabus/08Environmental%20\(III-V\).pdf](https://ncert.nic.in/pdf/syllabus/08Environmental%20(III-V).pdf)

Pedagogy:

Chalk and Talk, PPT, group discussion, group activities, and community involvement.

Rationale for Nature of Course:

Develop skills and confidence, in environmental conservation and management, blending theoretical knowledge with practical applications, ethical considerations, and policy awareness, address environmental challenges and contribute to a sustainable future.

Knowledge and Skill:

- Understand the Fundamental Concepts and challenges in Environmental Science
- Gain insight into environmental ethics and the cultural significance of biodiversity.
- Develop the skill in assessing human activities' impact on the environment.

Activities to be given:

Field trips, group projects, and community campaigns help develop a comprehensive understanding of environmental issues and the skills required to address them effectively.

Course learning Outcomes (CLOs):

CLO	Course Outcomes Statements	Knowledge According to Bloom's Taxonomy
CLO 1	Articulate the significance of natural resources and the need for sustainable management practices.	K1 to K3
CLO 2	Identify and differentiate between different types of ecosystems, and their specific characteristics.	K1 to K3
CLO 3	Assess the values of biodiversity, including consumptive use, social benefits, and cultural values.	K1 to K3
CLO 4	Evaluate the effects of pollution on the environment and human health.	K1 to K3
CLO 5	Explore global environmental issues and the influence of information technology on environmental awareness and conservation.	K1 to K3

K1- Remembering and recalling facts with specific answers.

K2- Basic understanding of facts and stating main ideas with general answers.

K3- Application oriented- Solving Problems.

Mapping of Course Learning Outcomes (CLOs) with Programme Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CLO1	3	1	2	1	3	3
CLO2	3	1	2	1	3	3
CLO3	3	1	2	1	3	3
CLO4	3	1	2	1	3	3
CLO5	3	1	2	1	3	3

1- Basic Level

2 - Intermediate Level

3 - Advanced Level

LESSON PLAN: TOTAL HOURS (30 Hrs.)

UNIT	DESCRIPTION	Hrs.	MODE
I	Natural Resources:- Water Renewable Resources and watershed management– Forest Resources, management and conservation - Soil Resources and conservation- Food Resources – Energy Resources – Non-renewable resources and conservation of energy.	6	Chalk and Talk, PPT, group discussions, presentations, quizzes, and Virtual Classes.
II	Ecosystem:- Structure of an Ecosystem, Abiotic Components – Biotic Components – Functional Components – Food Chain – Energy Flow – Biogeochemical Cycles – Types of Ecosystems – Types of Aquatic Ecosystem – Pond Ecosystem – Grassland Ecosystem – Desert Ecosystem.	6	Chalk and Talk, PPT, group discussions, presentations, quizzes, and Virtual Class.
III	Biodiversity and Conservation:- What is Biodiversity – Levels of Biodiversity – Values of Biodiversity – Consumptive use value – Social benefits – Cultural Values – India as a Mega Diversity Nation – Conservation and its significance.	6	Chalk and Talk, PPT, group discussions, presentations, quizzes, and Virtual Class.
IV	Pollution:- Types of Pollutants – Types of Pollution - Air Pollution -Water Pollution - Thermal Pollution – Marine Pollution – Soil Pollution, Noise Pollution – Radiation Pollution. Solid waste and consumerism, effects of soil pollution, solid waste management – Control Measures.	6	Chalk and Talk, PPT, group discussions, presentations, quizzes, and Virtual Class.
V	Environmental Ethics and Social Issues:- Attitudes of Major Religions towards the Environment – Human Population and Environment – Globalization and the Environment – Global Environmental Issues – Information Technology and the Environment, Alternative Lifestyles – Role of Individuals, Organizations and Government in protecting the Environment.	6	Chalk and Talk, PPT, group discussions, presentations, quizzes, and Virtual Class.

Course Designer
Dr.(Mrs.)V.Vijaya