



Virudhunagar – 626 001.

PART -IV
I YEAR UG –SELF LEARNING SUBJECT
(For those who join From June 2023 Onwards)

Sem	Subject	Hours	Credit	Int+Ext =Tot	Subject Code	Focus on Employability/ Entrepreneurship/ Skill Development	Revised/ New/ No Change/ Interchanged. (If revised % of change)
II	Environmental Studies / சுற்றுச்சூழல் கல்வி	-	2	25+75=100	U24ES41		New

PART IV
ENVIRONMENTAL STUDIES
(For all UG Degree Courses English Medium)
SEMESTER - II

Contact Hours per week : Nil

Subject Code : U24ES41

Contact Hours per semester: Nil

Credits : 2

Preamble

This course familiarizes the learners with the essentials of Environmental science by focusing on variety of environmental issues and factors affecting environment.

Course Outcomes (CO)

On successful completion of the course, the learners will be able to

CO1: recognize the importance of environment and role of Individuals in its protection.

CO2: explain the key concepts of Ecosystem, Food Web and Bio geochemical.

CO3: apply the right measures for the sustainable use of natural resources.

CO4: analyze the ethical, cross-cultural, and historical context of environmental issues and the links between Human and Natural Systems.

CO5: examine the impact of human action on the biological environment

Unit I: Biosphere and Bio-resources

6 hours

Scope and importance of Environmental Studies - Environmental segments: Atmosphere, Hydrosphere, Lithosphere and Biosphere – Renewable and non-renewable resources - Forest resources - Water and mineral resources - Food resources.

Unit II: Ecosystem

6 hours

Definition of ecosystem – Types of Ecosystem: Terrestrial and Aquatic - Structure and function of ecosystem –Nutrient cycling: Food chain and food web – Tropic levels in Ecosystem: Ecological pyramids – Biogeochemical cycle: carbon and nitrogen cycle - Ecological succession.

Unit III: Biodiversity and its conservation

6 hours

Biodiversity: Definition and level - Biogeographical classification of India - Value of Biodiversity - Indian Biodiversity Hotspots – Endangered and Endemic species of India– Threats



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to biodiversity – Conservation of Biodiversity:*In-situ* and *Ex-situ* conservation. IUCN Red list Categories.

Unit IV: Environmental Pollution

6 hours

Environmental pollution: definition, Causes, effects and control measures of; Air, Water, Soil and Noise pollution – Thermal and Radioactive pollution – Nuclear hazards and human health risks.

Unit V: Social Issues and Environment

6 hours

Green house effect - Acid rain - Global warming and Ozone Depletion - Sustainable Development and Water conservation - Solid waste Management – Consumerism - Nuclear accidents and Disaster Management - Environmental laws and Environmental Ethics.

TEXTBOOKS:

1. Dharmaraj, J. 2008.*Environmental Studies*, Tenzy Publication Sivakasi.
2. Susila Appadurai, 2012. *Environmental Studies*, New Century Book House.
3. Erach Bharucha, 2004. *Environmental Studies*. UGC, New Delhi

REFERENCES

Books

1. Agarwal, K.C. 2001. *Environmental Biology*, Nidi publication Ltd, Bikaner.
2. Miller, T.G. 2004. *Environmental sciences*, Wadsworth Publishing Co, New Delhi.

Web Sources

1. <https://www.youtube.com/watch?v=QewEi2U1jLs>
2. <https://byjus.com/biology/endemic-species/>