Home

Savitribai Phule Pune University
Third Year of Artificial Intelligence and Data Science (2019 Course)
317527: Environmental Studies

Teaching Scheme:	Credit	Examination Scheme:
Tut: 01 Hours/Week	01	Term Work(TW): 25 Marks

Prerequisite Courses, if any: Multidisciplinary nature of environmental studies; components of environment – atmosphere, hydrosphere, lithosphere and biosphere.

Companion Course, if any:

Preamble:
An environmental study is a multidisciplinary academic field which systematically studies human interaction with the environment. Environmental studies connect principles from the physical sciences, commerce/economics, the humanities, and social sciences to address complex contemporary environmental issues. Imparting basic knowledge about the environment and its allied problems. Developing an attitude of concern for the environment.

Course Objectives:

- To gain an understanding of the Environment where we live
- Understanding the importance of water
- To educate about Air and Noise pollution
- To explain the concepts of E- waste and Green Computing

Course Outcomes:
On completion of the course, learner will be able to–

CO1: Aware the importance of environment
CO2: Understand the water pollution
CO3: Know the Air and noise pollution
CO4: Understand the E-waste and green computing

Course Contents

Unit I	Introduction to Environmental Pollution	(03 Hours)

Environmental pollution: Environment and its importance, Definition, Types. Effect of environmental pollution on Plants, Non-living things.

Unit II	Water Pollution	(03 Hours)

Water Pollution: Definition, Sources of water Pollution, Types of wastewater-Domestic and industrial wastewater

Unit III	Air Pollution and Noise Pollution	(03 Hours)

Air pollution: Definition, Sources/causes of air pollution. Atmospheric layers, Effects on human.
Noise Pollution: Definition of Noise Pollution, Types of Noise Pollution

Unit IV	E-waste Management and Green computing	(03 Hours)

E-waste management: Definition of E-waste, Sources of E-waste, Types of E-waste
Green computing: Definition, Objectives of Green Computing, Necessity, Environmental benefits

Tutorial Conduction and Term work Guidelines (Set of Suggested Activities)

The students are expected to submit

1) Report/Presentation on the effect of Environmental Pollution on any world famous Structure/ monument.
2) Report/Presentation on importance of different sources of water available nearby them.
3) Report/Presentation based on the data collected from the local authorities on air pollution and noise pollution.
4) Report/Presentation on the E-Waste generated in the campus.

Learning Resources

Text Books:

3. "The text book of Environmental studies", Dr. P. D. Raut, Shivaji University, 2013.
4. "A Text Book of Environmental Studies", Dr. D. K. Asthana, S. Chand.
5. "Environmental Pollution, monitoring and control", S. M. Khopkar, New Age Publication.

Reference Books:

4. "Air Pollution", M. N. Rao, McGrawHill, Publication.
5. "E-waste Management and Procurement of Environment", Dr. Suresh Kumar, Authorspress, 2021.
6. "Green Computing Approach towards sustainable development", M. Afshar Alam, Dreamtech Press. 2020.

Web Links:

1. Prof. Mukesh Sharma, IIT Kanpur https://archive.nptel.ac.in/courses/105/102/105102089
2. Prof. J. Bhattacharyya, IIT Kharagpur, https://archive.nptel.ac.in/courses/123/105/123105001
3. Prof. Bhola Ram Gurjar, IIT Roorkee, https://archive.nptel.ac.in/courses/105/107/105107213

e-Books: 1. Bharucha, Erach (2005): "Text Book of Environmental Studies for Undergraduate Courses", University Press (India) pvt ltd, Hyderabad, India
2. Kothari Dr Milind- 2005- Environmental Education- Universal Publication Agra.
3. IGNOU 1995- FST- 1/4 Foundation course in Science and Technology "Environment and Resource" – Indira Gandhi Open University, New Delhi.

MOOC Courses: https://onlinecourses.swayam2.ac.in/cec21_ge21/preview

@The CO-PO mapping table

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1							3					1
CO2							3	2				
CO3							3	2				
CO4							3	2				