



Semester: III			
Course name: Environmental Education – 1			
Course code: V2BC230311T			
Course Credits: 2			
Pedagogy: Classrooms lecture, Case studies, Group discussion & Seminar			
Course Description: The course aims to give an introduction to the environment, to highlight its multidisciplinary nature. A detailed emphasis has been laid upon global environmental issues and their remedial measures. The importance of biodiversity, followed by their conservation, and climate change along with their mitigation measures have been incorporated, so as to give an in depth understanding of the global environment issues and their modes of remediation.			
Learning Objectives: The course aims to help learners to acquire conceptual knowledge of; LO1. Information related to the major attributes of environment. LO2. Importance of forest and wildlife, and the requirement of their protection.			
Course Outcomes: On successful completion of the course, students will be able to: CO1. Develop the ability to apply multidisciplinary knowledge. CO2. Recognize the global environmental problems.			
Unit No.	Unit Name	Topics	Nos. of lectures
1.	Introduction to Environment	<ul style="list-style-type: none"> • Multidisciplinary nature of environmental studies; Scope and importance; the need for environmental education; environmental ethics. • Ecology and environment, ecosystem, components of environment, food chains, food web and functions of ecosystem, energy flow in an ecosystem, ecological pyramid • Concept and classification of biomes, biogeochemical cycles, ecosystem preservation. 	3
2.	Global environmental issues and environmental pollution	<ul style="list-style-type: none"> • Environmental pollution: definition, sources, causes, impacts, remedial measures; air, water, soil, noise and radiation pollution • Solid Waste Management- Control measures of urban and industrial waste, Waste segregation, E-waste, Biomedical waste • Pollution Case Studies: Delhi Air Pollution and public health issues, Ganga Action Plan, Bhopal Gas Tragedy • Stratospheric ozone depletion, El Nino, Acid rain. • Disasters and disaster management; Special reference to floods, earthquakes, cyclones, landslides. 	5
3.	Biodiversity and Conservation	<ul style="list-style-type: none"> • Biodiversity: Definition, Levels of biodiversity, biogeographic zones of India, global biodiversity hotspots, Keystone species, Values of biodiversity. Endangered and endemic species of India, IUCN Red list criteria and categories • Threats to biodiversity: Habitat loss, poaching of wildlife, Conservation of biodiversity: In-situ and Ex-situ methods • Case Studies: Project Tiger, Deforestation in Amazon, 	3



		Reintroduction of Asiatic Lions in Kuno National Park, India; reintroduction of Cheetah in India.	
4.	Climate Change, its impact and mitigation	<ul style="list-style-type: none">● Greenhouse effect, Global warming; Definition, scope and facts of climate change, Impacts of global climate change, Climate change adaptation and mitigation● National Action Plan on Climate Change (NAPCC), National Clean Air Programme (NCAP), The Net Zero Commitment● UN Initiatives and International Agreements: Montreal Protocol; UNFCCC and Kyoto Protocol (COP3), Paris Climate Summit.	3

SUGGESTED TEXT BOOKS/ READING MATERIALS:

1. Mitra, A. K and Chakraborty, R., Introduction to Environmental Studies, Book Syndicate, 2016.
2. Basu, M. and Xavier, S., Fundamentals of Environmental Studies, Cambridge University Press, 2016.
3. Enger, E. and Smith, B., Environmental Science: A Study of Interrelationships, Publisher: McGraw-Hill Higher Education; 12th edition, 2010.
4. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
5. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India Univ. of California Press.
6. Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia: Saunders.
7. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.
8. Agrawal, K M, Sikdar, PK and Deb, SC, A Text book of Environment, Macmillan Publication, 2002.
9. Richard T Wright, Environmental Science: Towards a Sustainable Future, Prentice-Hall Inc., 2008.