

Faculty Name: Dr. Jyothi D N				Academic Year: 2026-27			
Department: CIVIL ENGINEERING							
Course Code	Course Title	Core/Elective	Prerequisite	Contact Hours			Total Hrs/ Sessions
				L	T	P	
BCV755B	Conservation of Natural Resources	Open elective	-	3	-	-	40
Objectives	• Learn types of land forms, soil conservation and sustainable land use planning. • Apprehend water resources, types, distribution, planning and conservation. Water pollution and types of uses. • Know the types of minerals and rocks. • Know the atmospheric composition of air, pollution and effects on human beings, animals and plants. Air pollution control. • Apprehend basics of biodiversity and ecosystems.						
Topics Covered as per Syllabus							
Module-1							
Land: Land as a resource, types of lands, conservation of land forms, deforestation, effect of land use changes. Soil health, ecological and economic importance of soil, impact of soil degradation on agriculture and food security, need for soil conservation, sustainable land use planning.							
Module-2							
Water: Global water resources, Indian water resources, Resources system planning. Water use sectors-domestic, industrial, agriculture. Water deficit and water surplus basins in India, equitable distribution, Inter-basin water transfers, interlinking of rivers – Himalayan component, peninsular component, issues involved. Ground water, its potential in India, conjunctive use, recharge of ground water. Contamination of ground water, sea water ingress, problems and solutions.							
Module-3							
Air: Introduction, composition, sources and classification of air pollutants, National Ambient Air quality standards (NAAQS), Air quality index, effects of air pollution on human health. Economic effects of air pollution. Control of air pollution by equipment, smoke and its control. Ozone depletion –impacts, photochemical changes.							
Module-4							
Biodiversity: Introduction, Flora and Fauna, Importance of biodiversity, Economic values-medicinal plants, drugs, fisheries biogeochemical cycling. Threat to biodiversity, natural & anthropogenic disturbance, habitat loss. Conservation of biodiversity, National parks, wild life sanctuaries, zoological gardens, gene banks, pollen culture, ecological restoration, social forestry. Ecosystem: Definition, Types: forest, grass land, marine, desert, wetlands, estuarine, lotic, lentic. Abiotic & biotic components of ecosystem.							
Module-5							
Global warming: concept, indicators, factor and effects. Global climate change-indicators, health impacts, effect on biodiversity. Introduction to global efforts in conservation of biodiversity. .EIA regulations in India, status of EIA in India, list of projects needing environmental clearance under EIA notifications. Case study of hydro power/ thermal power projects.							
List of Text/ reference books							
1. P.Jaya Rami Reddy, “A Textbook of Hydrology”, University Science Press, New Delhi, 2011. 2. Krishnamurthy K.V., “An advanced textbook of Biodiversity- principle & practices.” Oxford and IBH publications Co.Pvt ltd, New Delhi. 2004. 3. Odum, E.P., “Fundamentals of Ecology”, W.B sounders, Philadelphia, USA, 1971							

4. Singh J.S, Singh S.P & Gupta, S.R., “Ecology, environment and resource conservation”, Anamaya publications, 2006	
Course Outcomes	1. Apprehend various components of land as a natural resource and land use planning. 2. Know availability and demand for water resources as applied to India. 3. Analyse the components of air as resource and its pollution. 4. Discuss biodiversity & its role in ecosystem functioning. 5. Critically appreciate the environmental concerns of today.

The Correlation of Course Outcomes (CO's) and Program Outcomes (PO's)

Subject Code:	BCV755B	TITLE: CONSERVATION OF NATURAL RESOURCES						Faculty Name:	Dr. Jyothi D N			
List of Course Outcomes	Program Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1	2	1	-	-	-	3	3	-	-	-	-	1
CO-2	2	1	-	-	-	3	3	-	-	-	-	1
CO-3	2	1	-	-	-	3	3	-	-	-	-	1
CO-4	2	1	-	-	-	3	3	-	-	-	-	1
CO-5	2	1	-	-	-	3	3	-	-	-	-	1

Note: 3 = Strong Contribution 2 = Average Contribution 1 = Weak Contribution - = No Contribution

The Correlation of Course Outcomes (CO's) and Program Specific Outcomes (PSO's)

Subject Code:	BCV755B	TITLE: CONSERVATION OF NATURAL RESOURCES	Faculty Name:	Dr. Jyothi D N
List of Course Outcomes	Program Specific Outcomes			
	PSO1		PSO2	
CO-1	1		-	
CO-2	1		-	
CO-3	1		-	
CO-4	1		-	
CO-5	1		-	

Note: 3 = Strong Contribution 2 = Average Contribution 1 = Weak Contribution - = No Contribution