

Subject Code: 2SC1000321	Subject Title: Ecology, Ecosystem & Sustainable Development
Course Type: Subjective Elective	

Course objective: The course is designed to understand the basic concept, flow of energy, the components and importance of ecosystem.

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
2	--	2	--	2	35	15	--	--	50

Unit	Content	Lectures	Weight (%)
1	✓ Introduction to environment and its component; ✓ Principles of ecology, Concept of ecosystem; abiotic and biotic components ✓ Terrestrial Biomes–Grasslands and Forests. ✓ Aquatic Biomes–Freshwater and Saline water. ✓ Experimental Ecosystem Models–Batch system, Flow-Through system. ✓ Experimental Ecosystem Models–Microcosms. ✓ Microbes within Macro-communities. ✓ Structure and Function of some Microbial Communities	15	50
2	Natural resources & its conservation: Classification of natural resources Conservation of natural resources: ✓ Minerals and their conservation; ✓ Energy and its conservation: Commercial and non-commercial sources of energy; non-conventional renewable sources of energy; ✓ Waste management ✓ Forest resources: Deforestation; Afforestation ✓ Grassland management ✓ Water resources and its management ✓ Soil erosion and Soil conservation	15	50

Learning Outcome: To understand the ecosystems and value it for sustainable development.

Reference book:

- P.D.Sharma, Ecology and Environment
- P.S.Verma, Principles of Ecology
- Atlas and Bartha, Microbial Ecology