

Subject Code: 2SC2000105	Subject Title: Ecology & Ecosystem
COURSE TYPE: CORE COURSE	

Course Objective:

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
4	--	4	--	4	60	40	--	--	100

Unit	Content	Lectures	Weightage
1	✓ Ecology: Introduction of Ecology ✓ Ecology in India ✓ Environment: (A) Atmosphere (B) Hydrosphere (Water) (C) Lithosphere (Soil) ✓ Abiotic environmental factors ✓ Biotic environmental factors	15	25%
2	✓ Population Ecology: Population characteristics, Population dynamics, Growth rate of population, Population dispersion, Regulation of population size ✓ Ecosystem: Structure and Function of Ecosystem, Ecological Pyramids, Energy flow in Ecosystem ✓ Types of Biochemical Cycle: (A) Water cycle (B) Gaseous cycles (C) Sedimentary cycles ✓ Pollution: Origin of Pollution, Air pollution, Water pollution, Land pollution, Radioactive pollution, Noise pollution	15	25%
3	✓ Ecology and Human Welfare: Conservation of Natural Resources ✓ Wild Life Management: Wild life of India, Concept of threatened species and Reasons for depletion of wild life ✓ Modes of Wild life Conservation ✓ Biogeography	15	25%
4	✓ Isolation: Concept of Isolation, Mechanism of Isolation, Factor responsible for isolation, Types of Isolation. ✓ Reproductive isolation, Types of Reproductive isolation, Role of Reproductive isolation in species formation. ✓ Adaptation: Concept of Adaptation, Types of Adaptation ✓ Adaptation and predators, adaptation and population.	15	25%

Learning Outcome:

Reference Books:

1. Verma and Agrawal. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology.
2. Magguran, A.E. (1996). Ecological diversity and its measurements. Princeton University.

3. Gadgil, M. (2002) A methodology manual for scientific inventorying, monitoring and conservation of Biodiversity.
4. Odum. E.P. 1996 Fundamentals of Ecology. Nataraj Publishers, Dehra Dun.
5. Smith, R.L. 1986. Elements of Ecology. Harper and Row Publishers, New York.
6. Berwer. A. 1988 .The Science of ecology. Saunder's college publishing.
7. Animal Cytology and Evolution – MJD, White Cambridge University Publications
8. Cell Biology, T. Devasena