



CLUSTER UNIVERSITY SRINAGAR

SYLLABUS (FYUP UNDER NEP 2020)

Offered By Department Of ENVIRONMENTAL SCIENCES

Semester 1st to 3rd (Multi-Disciplinary Course)

Course Title: Ecology & Environment

Course Code: UGENS22D101

Credits: 3

Contact Hrs: 45

Max. Marks: 75

External: 55; Min Marks: 22

Internal (Continuous Assessment): 20 Marks, Min Marks: 08

Learning Objectives:

Students will be able -

1. To acquire deeper understandings of ecology and environment.
2. To know the about the importance of environment, its components and relationship with man.
3. To make the students aware about ecosystem dynamics and sustainable way of living and conserving natural resources.

Learning Outcomes:

After the completion of the syllabus, the student will gain knowledge of -

1. The concepts about fundamental theories, principles and terminology of ecology and environment.
2. Components of environment and practices to safeguard it.
3. Understanding of ecosystem structure and function.

Unit I: Fundamentals of Ecology and Environmental Science

15 Hours

- 1.1. Introduction to Ecology – Definition, Objectives, Subdivisions and Scope
- 1.2. Environment – Concept, Definition, and Importance
- 1.3. Relation between Ecology and Environmental Science
- 1.4. General concept – Levels of organisation, Autecology and Synecology
- 1.5. Man – Environment Interrelationships

Unit II: Components of Environment

15 Hours

- 2.1. Environment: Components
- 2.2. Atmosphere – Composition and Structure
- 2.3. Hydrosphere – Global water resources, distribution and hydrological cycle
- 2.4. Lithosphere – Structure and Composition
- 2.5. Biosphere – brief account and Nutrient cycling (C, N, P and S)

Unit III: Ecosystem Dynamics

15 Hours

- 3.1. Structure of Ecosystem
- 3.2. Functioning of Ecosystem: food chain, food web, energy flow
- 3.3. Ecological pyramids
- 3.4. Ecological succession
- 3.5. Ecosystem management

Suggested Reading

1. Environmental Science: Botkin, Keller
2. Environmental Science: Cunningham, Saigo
3. Environmental Science: Jackson & Jackson
4. Environmental Science: Tyler Miller
5. Environment and Ecology: Deeksha Dave and S.S. Katewa
6. Concepts Of Ecology: E.J. Kormondy
7. Ecology & Environment: P.D. Sharma