



# CLUSTER UNIVERSITY SRINAGAR

## SYLLABUS (FYUP UNDER NEP 2020)

**Offered By Department Of ENVIRONMENTAL SCIENCES**

**Semester 1<sup>st</sup> Skill Enhancement Course (SEC)**

### ***Course Title: Vermitechnology-I***

**Course Code: UGENS22S102**

**Credits: 4 (Theory: 1, Practical: 3)**

**Contact Hrs: 105 (Theory: 15, Practical: 90)**

**Max. Marks 100**

**Theory External: 15; Min Marks: 06**

**Theory Internal (Continuous Assessment): 10 Marks, Min Marks: 04**

**Practical Experimental Basis= 45 Marks, Min. Marks: 18**

**Practical Internal (Continuous Assessment): 30 Marks, Min. Marks: 12**

#### **Objectives**

The skill enhancement course in vermitechnology is designed to provide students an in-depth knowledge about the theoretical and practical aspects of vermiculture, vermicomposting and other uses of worms.

#### **Learning Outcomes**

In this course students shall be acquainted with the basic concepts of vermitechnology; historical evolution of the field; taxonomy, morphology and anatomy of earthworm; environmental requirements for vermiculture; enemies, diseases and habitat ecology of earthworms; physical and chemical properties of vermicompost and vermiwash; methods, economics and applications of vermitechnology.

#### **THEORY (15 Hrs)**

##### **Introduction to vermitechnology**

1. Definition and concept of vermitechnology
2. History of vermitechnology
3. Importance of Vermitechnology
4. Environmental parameters for Vermiculture and vermicomposting
5. Taxonomy of earthworm

#### **PRACTICALS (Laboratory Course, 90 Hrs)**

1. Key to identify earthworms
2. Study of systematic position, habit and habitat of *Eisenia fetida*
3. Study of life cycle of *Eisenia fetida*
4. Determination of moisture content of vermicompost
5. Determination of water holding capacity of vermicompost
6. Determination of bulk density of vermicompost
7. Determination of porosity of vermicompost
8. Determination of pH of vermicompost and vermiwash
9. Field collection and identification of local earthworms