



CLUSTER UNIVERSITY SRINAGAR

SYLLABUS (FYUP UNDER NEP 2020)

Offered By Department Of BOTANY/BIO-RESOURCES

Semester 1st Skill Enhancement Course (SEC)

Course Title: Mushroom Cultivation Technology-I

Course Code: UGBOT22S103

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

Course Objectives

The main objectives are to

- Provide hands on training about history, scope, classification and identification of mushrooms.
- Give the students acquaintance to the pre-requisites for mushroom cultivation.
- Help the students to learn how to procure and prepare basic materials for mushroom cultivation.

Course Outcome

After successful completion of the course, students will be able to:

- Classify and identify mushrooms based on structure and ecology.
- Gain the knowledge about culturing of mushrooms and spawn production.
- Learn how to prepare substrates for mushroom cultivation.

Unit: I

Introduction to Mushrooms (Theoretical Part)

- Introduction, history and scope of mushroom cultivation.
- Classification of mushrooms—structural and ecological.
- Identification of mushrooms.
- Biology of mushrooms.

Unit: II

Mushroom Culture and Spawn Preparation (Practical Part)

- Sterilization of glassware, equipment and culture media used in mushroom cultivation.
- Preparation of culture media: potato dextrose agar (PDA) and malt extract agar (MEA) media.
- Preparation of spawns (grain spawn, straw spawn and sawdust spawn) and mother spawn.
- Multiplication of spawn, spawning, spawn running and cropping.

Unit: III

Compost Preparation and Casing (Practical Part)

- Preparation of different composts and compost beds.
- Materials required for different types of compost.
- Methods of composting for mushroom cultivation.
- Casing and casing material used in mushroom cultivation.

Unit: IV

Morphology and Identification of Local Mushrooms (Practical Part)

- Morphology of local flora and preserved specimen of mushroom.
- Identification of local mushroom species.
- Identification of mushroom by spore print, spore transfer and germination methods.
- Life cycle of mushroom.

Suggested Readings:

- Nita Bhal. (2000). Handbook on Mushrooms. 2nd ed. Vol. I and II. Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
- Pandey R. K, S. K Ghosh, 1996. A Hand Book on Mushroom Cultivation. Emkey Publications.
- Thapa CD, Prakasam V, Singh M (2016). Mushroom Culture. www.agrimoon.com.
- Tewari, Pankaj Kapoor SC (1988). Mushroom Cultivation, Mittal Publications, Delhi, India.