



CLUSTER UNIVERSITY SRINAGAR

SYLLABUS (FYUP UNDER NEP 2020)

Offered By Department Of BIO-TECHNOLOGY

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

Course Title: Introduction to Bio-Technology

Course Code: UGBTC22D101

Credits: 3

Contact Hrs: 45

Max. Marks: 75

External: 55; Min Marks: 22

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

Objective: To make students comprehend the scope and applications of biotechnology *vis-à-vis* Human Health, Well-being of other life forms and our Environment.

Course Outcome:

After completion of course students will be able to:

1. Understand Biotechnology as a discipline.
2. Applications of Biotechnology in various fields.

UNIT I:

(15 Hrs)

Scope of Biotechnology

History and Introduction to Biotechnology, Traditional and Modern Biotechnology, Branches of Biotechnology (Red Biotechnology, Green Biotechnology, Food Biotechnology, White Biotechnology, Environmental Biotechnology, Blue Biotechnology), Biotechnology Research in India, Biotechnology in context with Developing world.

UNIT II:

(15 Hrs)

Biotechnology Applications I

Applications of Biotechnology in Agriculture: GM Food (Papaya and Tomato), Fungal and Insect Resistant Plants BT Crops (Cotton), Modifications in Plant Quality (Golden Rice); Fermentation and fermented products (Cheese and Curd)

UNIT III:

(15 Hrs)

Biotechnology Applications II

Applications to Human Health (Antibiotics, Vaccines, Insulin); Environment (Bioremediation and Biofuels); Ethics in Biotechnology and IPR.

Books Recommended:

1. Biotechnology, B.D Singh
2. Biotechnology, U Satyanarayana
3. Biotechnology, P.K Gupta