

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR
B. Sc. BIOTECHNOLOGY SEMESTER –III, IV, V & VI (2016-17)

Skill Enhancement Course (Any Four)

BOTANY:

1. Biofertilizers

(Credits 2)

Credit hours: 30

Unit 1 **4 Credit hours**

General account about the microbes used as biofertilizer – Rhizobium – isolation, identification, mass multiplication, carrier based inoculants, Actinorrhizal symbiosis.

Unit 2 **8 Credit hours**

Azospirillum: isolation and mass multiplication – carrier based inoculant, associative effect of different microorganisms. *Azotobacter*: classification, characteristics – crop response to *Azotobacter* inoculum, maintenance and mass multiplication.

Unit 3 **4 Credit hours**

Cyanobacteria (blue green algae), *Azolla* and *Anabaena azollae* association, nitrogen fixation, factors affecting growth, blue green algae and *Azolla* in rice cultivation.

Unit 4 **8 Credit hours**

Mycorrhizal association, types of mycorrhizal association, taxonomy, occurrence and distribution, phosphorus nutrition, growth and yield – colonization of VAM – isolation and inoculum production of VAM, and its influence on growth and yield of crop plants.

Unit 5 **6 Credit hours**

Organic farming – Green manuring and organic fertilizers, Recycling of bio-degradable municipal, agricultural and Industrial wastes – biocompost making methods, types and method of vermicomposting – field Application.