



Syllabus

First Semester Courses in MSc (MICROBIOLOGY)

2023-2024

Contents:

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APPROVED SYLLABUS

M.Sc. Part 1, Sem 1 MICROBIOLOGY

Course code: PSMIC6001FP1

FIELD PROJECT

TITLE: SOIL MICROBIAL ANALYSIS

Credits 2

Course Objectives:

- Understand the significance of soil microbial analysis in soil fertility
- Understand the formulation of microbial consortia for enhancing plant growth, yield and quality

Number of hours: 60

Course Outcomes (COs):

- Process soil samples to isolate and identify agriculturally important microorganisms from soil samples
- Prepare/make/design microbial consortia to be used for increasing yield and quality of agricultural products
- Analyze results from soil samples collected from field projects to assess the utility of microbial consortia

Soil microbial analysis

1. Soil samples collected from agricultural fields will be analyzed for various plant growth promoting microorganisms with the view to formulating consortia that can be used as biofertilizers.
2. Soil samples will be analyzed for all the types given below
 - Total microbial counts
 - Nitrogen fixers
 - Phosphate solubilizers
 - Potassium solubilizers

Evaluation will be based on practical work carried out and report written.

