



MANGALORE UNIVERSITY

DEPARTMENT OF BIOSCIENCES

M.Sc. ENVIRONMENTAL SCIENCE

ESP 554 ENVIRONMENTAL BIOTECHNOLOGY LAB

Course Outcomes:

CO1 Get the knowledge of microbial assays.

CO2 Describe plant and animal tissue culture techniques.

CO3 Describe microbial fermentation methods.

CO4 Understand vermicompost preparation and analysis.

1. Microbiological assays: Amino acids, vitamins, and antibiotics.
2. Microbial fermentation; ethyl alcohol, volatile fatty acids and antibiotics (from bacteria, actinomycetes and yeasts).
3. Biotransformations and assessment of production of microbial enzymes by bacteria, actinomycetes and fungi.
4. Production of secondary metabolites from microbes.
5. Animal tissue culture -Techniques of growing cells.
6. Plant tissue culture.
7. Restriction endonucleases on DNA separation- DNA fragments.
8. Biofilm development.
9. Worm culture.
10. Practicals on Computer.

