

BASIC MICROBIAL BIOTECHNOLOGY

(Course Duration: 25-30 days)

Coursework

Isolation of microorganisms from natural sources.

Sterilization techniques.

Pure culture preparation.

Identification of microorganisms

(i) Colony morphology

(ii) Staining techniques – Gram's staining, Endospore staining, etc.

Biochemical confirmation.

Screening of microorganisms for industrial applications.

Casein hydrolysis

Starch hydrolysis

Cellulose hydrolysis

Production of Protease / Amylase /Cellulase enzyme.

Evaluation of industrial applications of extracted enzymes.

Isolation of Plasmid DNA from prokaryotes

Isolation of Genomic DNA from Prokaryotes

Quantitative estimation of DNA

AGE (Gel Electrophoresis and applicability in Industries)

U.V. Transillumination and the applicability in Biotech industries