

INDUSTRIAL ENZYMOLOGY AND DRUG DISCOVERY

(Course Duration: 60 Days)

Coursework

Basics of Enzyme technology and importance of biocatalysts in different metabolic pathways

Isolation of micro-organisms from soil by serial dilution

Screening for the enzyme production

Pure culture preparation

Batch Culture

Enzyme assay

Enzyme purification

(i) Salt precipitation technique

(ii) Dialysis

(iii) Ion exchange chromatography

Quantitative estimation of Protein

Enzyme kinetic

a. pH

b. Temperature

c. Substrate concentration

d. Activator

e. Inhibitor

Immobilization of Enzyme

HPLC Basics

Introductory Bioinformatics

Protein and protein physical properties

Proteomics

Traditional and Rational Drug discovery

Chemo informatics databases

Application of force fields

Drug screening and targeting

Active site predictors

Binding site analysis

Ligand design

Energy optimization

Robotics and Machine learning

KEGG and its applications

Docking

ADME and log p concept

Major Research Project