



# MANGALORE UNIVERSITY

DEPARTMENT OF BIOSCIENCE

## BSP460 METABOLISM AND BIOENERGETICS

### Course Outcomes:

*After successful completion of the course, students will be able to :*

- Enhance the theoretical knowledge in metabolism and bioenergetics.
  - Know how to perform spectrophotometric estimation of various metabolites.
  - Diagnose some of the metabolic diseases through biochemical tests.
  - Gain the skill to quantify vitamins and phenolics in plant samples.
  - Become expert in calculations of standard free energy change, redox potential, and mitochondrial respiration.
1. Spectrophotometric estimation of metabolites: serum protein, sugar, creatinine, urea, uric acid
  2. Colorimetric analysis of vitamins, ascorbic acid etc.,
  3. Estimation of plant phenolics
  4. Tests to measure glycosuria, proteinuria etc
  5. Calculations in Bioenergetics: standard free energy change, redox potential, mitochondrial respiration etc.

