

# UNIVERSITY OF NAIROBI

## SCHOOL OF BIOLOGICAL SCIENCES

### SBT 306: PLANT PHYSIOLOGY BIOENERGETICS AND ENZYMES

Overall objective : To prove a basic understanding of how the Principles Bioenergetics and Enzymes help understand plant physiological

- Bioenergetics : overview
  - Free energy changes as they relate to biochemical process
  - Free energy & chemical reactions
  - Equilibrium constants and free energy changes
  - Coupled reactions
  - High energy compounds
  
- Enzymes : overview
  - Relation between enzymes and proteins
  - Brief description of protein synthesis
  - Structural categories of proteins
  
- Catalytical Properties of enzymes
- Enzyme kinetics
  - Lowering of the activation energy
  - Michael – Menten kinetics
  - Line Weaver – Burk Transformation
  
- Inhibition of Enzyme catalysed reactions
  - Competitive and non competitive inhibition
  - PH and temperature sensitivity
  - Regulation of enzyme activity
  
- Enzyme/substrate concentration
  - Allosteric Regulation