

Zoology Course 2.01

GENETICS, BIOCHEMISTRY AND EVOLUTION

2 CREDITS

Objectives

- To study the basics of genetics
- To understand the biochemistry within the animal system
- To study how the animal life evolved

UNIT I: GENETICS AND BIOCHEMISTRY

(15 Lectures)

Genetics

Genes and Gene Concept

Mendelian Genetics – Monohybrid and Dihybrid Crosses

Epistasis

Multiple Alleles: With respect to ABO blood groups

Human Pedigree

Chromosomal and Physical Aberrations – Inversion, Translocation, Deletion

Biochemistry

Definition, Classification, Structures and Biological Role of:

Proteins

Carbohydrates

Lipids

UNIT II: EVOLUTION

(15 Lectures)

Evolution

Concept of evolution

Origin of life on earth

Origin of Prokaryotic and Eukaryotic cells

Variations, Mutations, Natural selection

Concept of species and speciation

Micro and Macro evolution

Ecological niche