

COURSE OUTCOMES OF GENETICS

SEMESTER – I

PAPER –I

THEORY (BS104)

TITLE- TRANSMISSION GENETICS

On Completion of the course the students will be able:

- To enable the students, understand Mendelian inheritance.
- To learn the concepts of Linkage.
- To know the significance of organellar inheritance.
- To understand the concept of sex determination and sex linked inheritance.

SEMESTER – II PAPER –II THEORY (BS204)

TITLE- MOLECULAR GENETICS & GENETIC ENGINEERING

On Completion of the course the students will be able:

- To study the structure of Nucleic acids.
- To Understand the gene expression.
- To know the regulation in Prokaryotes & eukaryotes
- To understand the concept of Genetic Engineering.

SEMESTER – III PAPER –III THEORY (BS305)

TITLE-BIOSTATISTICS & BIOINFORMATICS

On Completion of the course the students will be able:

- To study the graphical methods for representing grouped data
- To understand the binary, arithmetic and logical operations.
- To know basics in handling bioinformatics tools.
- To understand the applications of biological databases.

SEMESTER – IV PAPER –IV THEORY (BS405)

TITLE-POPULATION GENETICS & EVOLUTION

On Completion of the course the students will be able:

- To study the structure of population and the concept of gene pool, deme and panmictic unit.
- To explore the extension of Hardy Weinberg law and establishment of Hardy-Weinberg equilibrium for single gene loci, multiple alleles, X- linked gene.
- To understand the effect of systemic and dispersive forces on the population.
- To know the inbreeding and its effect on genotype frequencies.

SEMESTER –V PAPER –V THEORY (BS- 504A)

TITLE- PLANT GENETICS & BIOTECHNOLOGY

On Completion of the course the students will be able:

- To study fine structure of plant Gene
- To enable the role of secondary metabolites and their use.
- To explore the applications of Plant tissue culture and Biotechnology.
- To know the organogenesis and somatic embryogenesis.

SEMESTER – VI PAPER –VIII THEORY (BS- 604A)

TITLE - CELLULAR & MOLECULAR IMMUNOLOGY

On Completion of the course the students will be able:

- To study the innate and acquired immunity.
- To enable the role of monoclonal and polyclonal antibodies and their applications.
- To explore the antigen – antibody interactions in understanding diagnosis.
- To know the various immunological techniques such as ELISA, Western BLOT, etc.

SEMESTER –V

THEORY (BS- 503)

GE – BASIC & APPLIED GENETICS

- To enable the students, understand Mendelian inheritance.
- To study the structure of Nucleic acids.
- To explore the applications of Genetic Engineering.
- To understand the effect of chromosome anomalies.
- To understand the process of prenatal diagnosis.