

COURSE OUTCOMES OF GENETICS (2019-2020)

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.
- To study multifactorial inheritance.
- To enable the students ,chromosome structure, chromatin organization and variation.

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.
- To Understand the gene expression.
- To study gene regulation in Eukaryotes.
- To explore the applications of Genetic Engineering.

(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.
- To insight into sequence alignment and the concept of phylogeny.
- To learn the axioms of probability.

(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.
- To understand the origins of genomes and acquisition of new genes.
- To analyze the Genetic Variation, Molecular Evolution and Quantitative inheritance.

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

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
- To create strategies of disease resistance.
- To Understand the process of gene transfer.

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

TITLE-CELLULAR & MOLECULARIMMUNOLOGY

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.
- To analyze autoimmunity and mechanism of auto immune diseases.
- To Understand the various classes of Immunoglobulin's.