

Genetics

Genetics is a branch of biology that deals with the heredity and variation of organisms. The mechanism of heredity eluded researchers until this century when they accepted the theory that offspring inherit their traits by the transmission of discrete units of information now called genes. The gene concept became more clear with the discovery that genes consist of DNA. The arrangement of DNA into chromosomes of eukaryotic cells makes it possible to transmit traits. The study of genetics includes three aspects of genes: Transmission, Expression and mutations. Areas of study include both Mendelian and non-Mendelian hereditary diseases,

genomics and mapping, Bioinformatics, developmental biology, Neurogenetics, sex determination, cytogenetics, human malformation, and chromatin structure and function. Conceptual approaches to medically related biological problems are employed frequently with the aid of automation and advanced imaging techniques, towards the goal of disease prevention, control and eradication methods such as gene therapies.

[Second Year]

Semester- 3

Core Courses		
Microbiology	1.	Cell Molecular Biology and Genetics
	2.	Principles of Genetics-I
	3.	Practicat
Biochemistry	1.	Invertebrate and Vertebrate
	2.	Animal Physiology and Adaptation
	3.	Practicals
Elective Courses		
Elective	1.	Elective
	2.	Elective
Foundation Course		
	1.	Functional English

Semester- 4

Core Courses		
Microbiology	1.	Molecular Genetics & Biostatistics
	2.	Principles of Genetics-II
	3.	Practicals
Biochemistry	1.	Invertebrate Vertebrata & Animal Behaviour
	2.	Physiology, Economic Zoology, Toxicology & Wildlife
	3.	Practicals
Elective Courses		
Elective	1.	Elective
	2.	Elective
Foundation Course		
	1.	Functional English

[Third Year]

Semester- 5

Core Courses		
Microbiology	1.	Instrumental Methods of Analysis
	2.	Molecular and Microbial Genetics
	3.	Introduction to Genetic Engineering
	4.	Plant Biotechnology
	5.	Immunogenetics
	6.	Human Genetics
	7.	Practicals (Paper 1 & 2)
	8.	Practicals (Paper 3 & 4)
	9.	Practicals (Paper 5 & 6)

Semester- 6

Core Courses		
Microbiology	1.	Biological Chemistry and Metabolism
	2.	Recombinant DNA Technology
	3.	Principles of Genetics and Breeding
	4.	Bioinformatics
	5.	Animal Biotechnology
	6.	Biomedical Genetics
	7.	Practicals (Paper 1 & 2)
	8.	Practicals (Paper 3 & 4)
	9.	Practicals (Paper 5 & 6)