

**JSS COLLEGE FOR WOMEN (AUTONOMOUS)
SARASWATHIPURAM, MYSORE-09**

LESSON PLAN

Name of the Teacher: Dr. Abhijith M Singh

Department: Biotechnology

Academic year and Semester: 2021-2022

Program: B.Sc.

Class and Section: I SEM (CBt, BcBt, MbBt, BBt)

Scheme: NEP

Course Name: B.Sc

Course Code: GMA 230

Title of the Paper : DSC 1- Cell Biology and Genetics

Sl NO	Month	Topic to be covered
1	OCT	Mendel's Genetics: Introduction and brief history of genetics. Mendelian theory: Laws of inheritance- dominance, segregation & independent assortment, incomplete dominance, codominance with an example, test cross & back cross. Gene interaction: Supplementary factors: comb pattern in fowls, Complementary genes- Flower colour in sweet peas, Multiple factors– Skin colour in human beings
2	NOV	Epistasis– Plumage colour in poultry, Multiple allelism: Blood groups in Human beings. Maternal Inheritance: Plastid inheritance in Mirabilis, Petite characters in yeast and Kappa particles in paramecium. Sex-linked inheritance: Colour blindness, haemophilia, Y linked traits. Chromosome theory of inheritance.
3	DEC	Linkage - Introduction, Coupling and repulsion hypothesis, Linkage in maize and Drosophila, chromosome mapping-linkage map in maize. Crossing Over -Types, mechanism and importance of crossing over.
4	JAN	Chromosomal variations: structural and numerical aberrations. Chromosomal evolution of wheat and cotton. Mutations: Types of mutations, Spontaneous and induced. Mutagens: Physical and chemical, Mutation at the molecular level.
5	FEB	Mutations in plants, animals and microbes for economic benefit of man. Sex Determination in Plants and animals: Concept of allosomes and autosomes, Activity: Assignment and seminar in the classroom.

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