Lesson Plan

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans- Odd Semester (Semester-V)

Session – 2024-25

Department- Zoology

Name of the Teacher- Dr. Neetu

Class- B.Sc. III (Medical)

Single section

Subject- Zoology

Paper–I: Developmental Biology (ZOO-501)

Month	Date		Topics to be Covered	Academic Activity to be Undertaken
	From	To		
July	22.07.2024	31.07.2024	Gametogenesis with particular reference to differentiation of spermatozoa	Power point presentation, group discussion, assignments, Flipped classroom method
August	01.08.2024	31.08.2024	Vitellogenesis, role of follicle/subtesticular cells in gametogenesis Egg maturation, egg membranes, polarity of egg Foetal membranes, their formation and role	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 27.08.2024 to review the progress of syllabus as per lesson plans				
September	01.09.2024	30.09.2024	Mammalian placenta- its formation, types and functions Fate maps of chick and frog embryos. Metamorphosis in *Herdmania* and *Rana* (frog) **MST**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 24.09.2024 to review the progress of syllabus as per lesson plans				
October	01.10.2024	31.10.2024	Fertilization, parthenogenesis Cleavage: Types of cleavage patterns depending upon amount and distribution of yolk and position of spindle. Blastula and types of blastula.	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 29.10.2024 to review the progress of syllabus as per lesson plans				
November	01.11.2024	18.11.2024	Induction: cell to cell interactions, juxtacrine, paracrine, gap junctions; basic concepts of organizers and inducers and their role Determination and differentiation Development up to three germ layers in *Herdmania*, *Amphioxus*, frog, chick and rabbit **Revision and Class test**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 18.11.2024 to review the completion of syllabus as per lesson plans				
End semester Examination 19.11.2024 to 26.12.2024				

Lesson Plan

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans- Even Semester (Semester-VI)

Session – 2024-25

Department- Zoology

Name of the Teacher- Dr. Neetu

Class- B.Sc. III (Medical)

Single Section

Subject- Zoology

Paper-I: Genetics (ZOO- 601)

Month	Date		Topics to be Covered	Academic Activity to be Undertaken
	From	To		
January	10.01.2025	31.01.2025	**Mendelism and Mendelian Ratios** Modification of Mendelian ratios Non-allelic gene interaction, Modified F2 ratios (9:7, 9:3:4, 9:3:3:1, 12:3:1, 13:3,15:1, 9:6:1) Gene modifications due to incomplete dominance, lethal factors (2:1), Pleiotropic genes **Multiple Alleles:** Blood group inheritance, eye colour in *Drosophila*, pseudo-allelism Multiple factors: Qualitative and quantitative characters, inheritance of quantitative traits (skin colour in man)	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 22.01.2025 to review the progress of syllabus as per lesson plans				
February	01.02.2025	28.02.2025	**Linkage, crossing over and recombination:** Linkage, sex-linked characters, crossing over, frequency of crossing over, cytological basis of crossing over, synaptonemal complex. Recombination in Fungi, (tetrad analysis).	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 27.02.2025 to review the progress of syllabus as per lesson plans				
March	01.03.2025	31.03.2025	**Mutations:** Spontaneous and induced mutations, physical and chemical mutagens, Detection of mutations in *Drosophila*. Inborn errors of metabolism in man (Phenylketonuria, Alkaptonuria, Albinism). Somatic mutations and carcinogenesis **Regulation of gene expression** in prokaryotes (Operon model) and in eukaryotes **MST**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 27.03.2025 to review the progress of syllabus as per lesson plans				
April	01.04.2025	26.04.2025	**Population genetics:** Equilibrium of gene frequencies and Hardy Weinberg Law Genetic recombination in bacteria (conjugation, transduction and transformation), plasmids **Applied Genetics:** Recombinant DNA, genetic cloning and its applications in medicine and agriculture, DNA fingerprinting **Revision and Class test**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 26.04.2025 to review the completion of syllabus as per lesson plans				
End semester Examination from 28.04.2025 to 04.06.2025				