Lesson Plan

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

Monthly Teaching Plans- Even Semester (Semester-VI)

Session – 2026-2027

Department- Zoology

Name of the Teacher- Dr. Divya Sharma

Class- B.Sc. Semester- VI

Subject- Zoology

Course Code: ZOO-DSC-15 Maj/Min-602

Course Title: Molecular Biology

Month	Date		Topics to be Covered	Academic Activity to be Undertaken
	From	To		
January	15.01.2027	31.01.2027	Nucleic acids as genetic material:Griffith's experiment; Avery, MacLeod and McCarty's experiment; Hershey–Chase experiment. Structure and function of nucleic acids: nucleosides, nucleotides, purines, and pyrimidines; biological importance of nucleotides	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 27.01.2027 to review the progress of syllabus as per lesson plans				
February	01.02.2027	28.02.2027	DNA structure: Watson and Crick model; A, B, and Z forms; supercoiled and relaxed DNA; Denaturation and renaturation; melting temperature (Tm); hyperchromic effect. RNA: Structure and types of RNA Central Dogma of molecular biology. Genome organization: structure of a gene, coding and regulatory sequences, introns, exons; Nucleosome concept and packaging of DNA into higher-order structures	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 24.02.2027 to review the progress of syllabus as per lesson plans				
March	01.03.2027	31.03.2027	DNA Replication: Meselson–Stahl experiment (proof of semiconservative DNA replication); Mechanism of DNA replication in prokaryotes and eukaryotes. Transcription in prokaryotes and eukaryotes: promoter, initiation, elongation, and termination. Components of protein synthesis machinery: mRNA, tRNA, ribosomes. **MST**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 24.03.2027 to review the progress of syllabus as per lesson plans				
April	01.04.2027	26.04.2027	Translation: aminoacyl-tRNA synthetases, charging of tRNA, ribosome assembly. Mechanism of protein synthesis in prokaryotes and eukaryotes: initiation, elongation, and termination. **Revision and Class test**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 21.04.2027 to review the completion of syllabus as per lesson plans				
End semester Examination from 27.04.2027 to 05.06.2027				

Lesson Plan

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

Monthly Teaching Plans- Even Semester (Semester-VI)

Session – 2026-2027

Department- Zoology

Name of the Teacher- Dr. Neetu

Class- B.Sc. Semester- VI

Subject- Zoology

Course Code: ZOO-DSC-14 Maj/Min-601

Course Title: Principles of Genetics

Month	Date		Topics to be Covered	Academic Activity to be Undertaken
	From	To		
January	15.01.2027	31.01.2027	Basic terminology in Genetics: gene, allele, locus, genotype, phenotype, homozygous, heterozygous, pure lines, test cross, back cross	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 27.01.2027 to review the progress of syllabus as per lesson plans				
February	01.02.2027	28.02.2027	Mendel's experiments and laws of inheritance Monohybrid and dihybrid crosses Non-allelic gene interactions: Modified Mendelian ratios (9:7, 9:3:4, 12:3:1, 9:6:1, 15:1) Non-Mendelian inheritance: Incomplete dominance (Snapdragon flowers), Codominance (Human blood group type AB), Multiple alleles (Eye color in Drosophila), Sex-linked inheritance (Haemophilia), Polygenic inheritance (Skin color in humans), Pleiotropy (Phenylketonuria), Lethal alleles (Coat color in Mice), Cytoplasmic inheritance (Kappa particles in Paramecium)	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 24.02.2027 to review the progress of syllabus as per lesson plans				
March	01.03.2027	31.03.2027	Chromosomal theory of inheritance Linkage: Characteristics, Types (Complete & Incomplete) and Significance Crossing over: Types (Single & Double), Mechanism (Synapsis, Synaptonemal complex, Tetrad formation, Crossing over & Terminalization) and Significance **MST**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 24.03.2027 to review the progress of syllabus as per lesson plans				
April	01.04.2027	26.04.2027	Mutations: Spontaneous and induced mutations, Physical mutagens (Ionizing & Non-ionizing radiations), Chemical mutagens (Base analogs & Alkylating agents) Human genetic disorders: Causes and symptoms of Cystic fibrosis, Sickle cell anemia, Down's syndrome, Turner's	Power point presentation, group discussion, assignments, Flipped classroom method

			syndrome, Klinefelter syndrome Population genetics: Gene frequencies, Hardy-Weinberg Principle. **Revision and Class test**	
Departmental Meeting on 21.04.2027 to review the completion of syllabus as per lesson plans				
End semester Examination from 27.04.2027 to 05.06.2027				

Lesson Plan

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

Monthly Teaching Plans- Odd Semester (Semester-V)

Session – 2026-27

Department- Zoology

Name of the Teacher- Dr. Divya Sharma

Class- B.Sc. Semester- V

Subject- Zoology

Course Code: ZOO-DSC-10 Maj-502

Course Title: Economic Zoology

Month	Date		Topics to be Covered	Academic Activity to be Undertaken
	From	To		
July	20.07.2026	31.07.2026	**Pearl culture:** Definition and importance; species used; basic principle of pearl formation and implantation.	Power point presentation, group discussion, assignments, Flipped classroom method
August	01.08.2026	31.08.2026	**Pisciculture:** Composite fish culture – principle, culture of the Indian major carps (*Catla catla, Labeo rohita, Cirrhinus mrigala*) and exotic carps (grass carp, silver carp, common carp), Integrated fish culture – with paddy, poultry, cattle and piggery. **Aquaculture:** Extensive and intensive fish culture, semi-intensive fish culture, cage culture, pen culture, capture and culture fisheries, freshwater prawn farming – principle and practices.	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 26.08.2026 to review the progress of syllabus as per lesson plans				
September	01.09.2026	30.09.2026	Sericulture: Definition and importance; species of silkworm (mulberry and non-mulberry: Eri, Muga, Tassar); basic requirements of sericulture; overview of silk reeling. Lac culture: Definition and importance; major lac insect species; host plants; basic rearing practices; economic importance of lac. Butterfly farming: Definition, importance, and basic requirements **MST**	Power point presentation, group discussion, assignments, Flipped classroom method
Departmental Meeting on 23.09.2026 to review the progress of syllabus as per lesson plans				
October	01.10.2026	31.10.2026	Dairy (Milch animal) farming: Definition and importance; major indigenous and exotic breeds of cow and buffalo (examples only); basic housing and nutritional management Goat farming: Importance; major breeds (examples only); basic rearing and feeding	Power point presentation, group discussion, assignments, Flipped classroom method

			practices, pasteurized goat milk. Sheep farming: Importance; major breeds (examples only); basic rearing and feeding practices; types of sheep wool (fine, medium, long, and coarse).	
Departmental Meeting on 28.10.2026 to review the progress of syllabus as per lesson plans				
November	01.11.2026	17.11.2026	Medically and veterinary important arthropods: Study of life cycle and economic importance of housefly, mosquito (*Aedes, Anopheles, Culex*), sand fly, tsetse fly, warble fly, tick (*Hyalomma*), and mite (*Sarcoptes*) Insect Control Methods: Physical and cultural methods; chemical control including organochlorines (DDT, BHC), organophosphates (malathion), botanical insecticides (nicotine, pyrethrum), and fumigants (aluminium phosphide); biological control using predators, parasites, and microbial agents (bacteria, viruses) Integrated Pest Management (IPM): Concept, components, and importance of IPM. **Revision and Class test**	Power point presentation, group discussion, assignments, Flipped classroom method
End semester Examination from 18.11.2026 to 31.12.2026				

Lesson Plan

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

Monthly Teaching Plans- Odd Semester (Semester-V)

Session – 2026-27

Department- Zoology

Name of the Teacher- Dr. Neetu

Class- B.Sc. Semester-V

Subject- Zoology

Course Code: ZOO-DSC-9 Maj/Min-501

Course Title: Cell Biology

Month	Date		Topics to be Covered	Academic Activity to be Undertaken
	From	To		
July	20.07.2026	31.07.2026	**Overview of cells:** General structure and organization of prokaryotic and eukaryotic cells. Structure of viruses and viroids.	Power point presentation, group discussion, assignments, Flipped classroom method
August	01.08.2026	31.08.2026	Microscopy: Principles and types of microscopes – simple microscope, compound microscope, light microscope, and phase contrast microscope. Fixation and Staining: Principles of tissue fixation; fixatives (Carnoy's and Bouin's) and their significance; Staining procedures (single and double staining)	Power point presentation, group discussion, assignments, Flipped classroom method Practical demonstration using Museum specimens, PPT, Online resources, Group discussion
Departmental Meeting on 26.08.2026 to review the progress of syllabus as per lesson plans				
September	01.09.2026	30.09.2026	Plasma membrane: Structure and organization of the plasma membrane with reference to the Fluid Mosaic Model. Transport across membranes – passive transport and active transport. Endoplasmic reticulum: Structure and functions of rough endoplasmic reticulum (RER) and smooth endoplasmic reticulum (SER). Golgi complex: Structure and functions of the Golgi apparatus. **MST**	Power point presentation, group discussion, assignments, Flipped classroom method Practical demonstration using Museum specimens, PPT, Online resources, Group discussion
Departmental Meeting on 23.09.2026 to review the progress of syllabus as per lesson plans				
October	01.10.2026	31.10.2026	Ribosomes: Types, structure, and functions of ribosomes. Lysosomes: Structure, functions, and polymorphism of lysosomes. Mitochondria: Structure and functions of mitochondria; semi-autonomous nature of mitochondria.	Power point presentation, group discussion, assignments, Flipped classroom method Practical demonstration using Museum specimens, PPT, Online resources, Group discussion
Departmental Meeting on 28.10.2026 to review the progress of syllabus as per lesson plans				
November	01.11.2026	17.11.2026	Nucleus: Structure and functions of the nucleus, including nuclear envelope, nuclear pore complex, and nucleolus. Cytoskeleton: Structure and functions of microtubules and microfilaments Cell Division: Cell Cycle, Mitosis, Meiosis and their significance. **Revision and Class test**	Power point presentation, group discussion, assignments, Flipped classroom method Practical demonstration using Museum specimens, PPT, Online resources, Group discussion
End semester Examination from 18.11.2026 to 31.12.2026				