



E.M.GOPALAKRISHNAKONEYADAVAWOMEN'SCOLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited(3rd Cycle)with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN 2024-2025

Class : I B.Sc Zoology

Sem : I

Sub. Code : 23OUZO11

Title of the Paper: Invertebrata

Total Hours : 75

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Taxonomy: Units of Classification, Criteria of classification -Principles of Classification - types of Coelom, types of Symmetry, Binomial nomenclature. Classification up to class level with example (Flow Chart only) - General characters of the phyla with examples: i) Protozoa ii) Porifera iii) Coelenterata iv) Platyhelminthes v) Nematoda vi) Annelida, vii) Arthropoda viii) Mollusca, ix) Echinodermata .	I B.Sc Zoology	10	Chalk and Talk, PPT, quiz, on the spot test	G. dB
Aug	I	Phylum Protozoa - Type study - Paramecium- General organization, cyclosis, contractile vacuole and conjugation only. Structure, Life history, pathology, prevention and control measures of i) <i>Plasmodium vivax</i> and ii) <i>Entamoeba histolytica</i> . Phylum: Porifera: Type study- <i>Leucosolenia</i> - general organization, histology, Spicules, reproduction and development only. Canal system in Sponges.	I B.Sc Zoology	10	Chalk and Talk, PPT, quiz, on the spot test	G. dB
Sep	II	Phylum: Coelenterata: Type study- Obelia, structure of obelia colony, Medusa, Nematocyst, reproduction and development (metagenesis) - Polymorphism in Coelenterata. Types of Corals- Ecological and Economic importance	I B.Sc Zoology	20	Chalk and Talk, OHP quiz, on the spot test	G. dB

Helminthes: Type study- *Fasciola hepatica* - external characters, digestive system, excretion, reproduction and development (life cycle). Structure, pathology and control measures of *Ascaris* and *Wuchereria*

Phylum: Annelida: Type study- Earth worm, External morphology, setae, nephridia,

A. F. C.

Oct

Phylum: Annelida: nerves system and reproductive system - Metamerism in Annelids.

I B.Sc
Zoology

Phylum: Arthropoda: Type study- *Penaeus indicus*- Marine Prawn - external morphology, appendages, digestive and excretory systems, reproductive system and development-Affinities of *Peripatus*.

III

Phylum: Mollusca: Type study - *Pila globosa*- external morphology, digestive system, respiratory system, osphradium only. -Cephalopods as an advanced Mollusca.

Phylum: Echinodermata; Type study Star fish (*Asterias*), external morphology, pedicellaria, --Water vascular system - Larval forms of Echinodermata

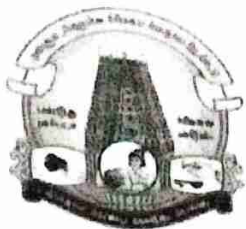
15

Chalk and Talk,
PPT, group
discussion, OHP
and You tube
Links

G. D. B.

G. D. Indira Kani
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G. D. Indira Kani
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LESSON PLAN

2024-2025

Class : I B.Sc Zoology

Sem : I

Sub. Code : 23OUZO1P

Title of the Paper: Lab in Invertebrata

Total Hours : 45

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Earthworm: Nervous System Cockroach: Digestive System, Nervous System Cockroach: Nervous System Pila: Digestive system Earthworm: Body Setae	I B.Sc Zoology	10	Dissection Charts Mounting	G. LB [Signature]
Aug	II	Cockroach: Trachea Honey bee: Mouth Parts Pila: Radula	I B.Sc Zoology	13	Mounting (Virtual lab) Mounting Mounting (Virtual lab)	[Signature]
Sep	III	Liver fluke: Miracidium, Redia and Cercaria Prawn: Nauplius, Zoea and Mysis Any Two Echinoderm Larvae. Protozoa: Paramecium-conjugation, Entamoeba	I B.Sc Zoology	10	Live specimen identification Observation of slides	[Signature]
Oct	IV	Porifera: Sponge-Gemmule and Spicules. Coelenterata: Obelia medusa, Sea anemone. Helminthes: Liver fluke, Ascaris (Male and Female) Annelida: Neris, Chaetopterus, Arthropoda: Prawn, Peripatus, Mollusca: Chiton, Sepia, Echinodermata: Starfish, Sea-urchin	I B.Sc Zoology	12	Observation of slides/images/spotters	[Signature]

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LESSON PLAN

2024-2025

Class : I B.Sc Zoology

Sem : I

Sub. Code : 23OUZ0SECN1

Title of the Paper: Ornamental Fish Farming And Management

Total Hours : 30

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
July	I	Unit I - Introduction - ornamental fish keeping as hobby and cottage industry Scope and self-employment of ornamental fish culture Domestic and global scenario of ornamental fish trade and export potential.	I B.Sc Zoology	6	Chalk and Talk, PPT, quiz, on the spot test	
Aug	II	Unit II - Identification of popular Ornamental fishes Siamese fighting fish, Gold fish, Rosy barb, Black molly, Guppy, Koi carp, Arowana and Angel fish.	I B.Sc Zoology	6	Chalk and Talk, PPT, group discussion, OHP and You tube Links	
Sep	III	Unit III - Construction of fish tank Size and shape of fish tank, bottom settings, stocking of fish, planting with aquarium plants, Accessories of fish Tank - aerators, types of filters, nets, lights and hood.	I B.Sc Zoology	8	Chalk and Talk, OHP, PPT presentations, quiz,	
Oct	IV	Unit IV - Transport of fishes: Oxygen packing, Food and feeding: Culture of live food organisms- Micro worms, vinegar eel, tubifex. Artificial feed - Pellet feed formulation. Unit V - Breeding, hatchery and nursery management of Butterfly fish, Sword tails, Blue morph and Anemone fish- Common diseases and treatment of ornamental fishes Nutritional diseases, White spot diseases, fungal diseases, Bacterial diseases, Dropsy diseases and ecto-parasites.	I B.Sc Zoology	10	Chalk and Talk, PPT, group discussion, OHP presentations, quiz, open book test	

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LESSON PLAN

2024-2025

Class : I B.Sc Zoology

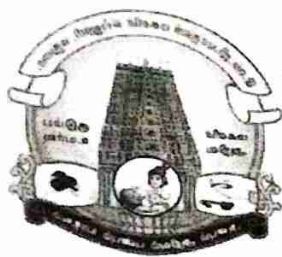
Sub. Code : ZOOUZOF01

Title of the Paper: Foundation Course in Zoology

Total Hours : 30

Sem : I

Month	Unit	Description of the Syllabus	Class	Hours Allotted	Teaching Mode & Methods	Course Teacher Signature
July	I	Unit I - Introduction to Zoology- Father of Zoology - Scope of zoology - Explain in brief account on Structural Zoology (Morphology, Anatomy, Histology, Cytology) - Developmental Zoology- Functional Zoology(Animal Physiology, Ethology)- Systemic Zoology (Protozoology, Entomology, Conchology, Malacology, Ichthyology, Herpetology, Ornithology, Mammalogy, Helminthology, Apiculture, Anthropology, Carcinology)- Distributional Zoology- Historical Zoology(Palaeontology, Phylogeny, Evolution) Medical Zoology, Economic Zoology. Molecular Biology and Genomics.	I B.Sc Zoology	4	Chalk and Talk, PPT, quiz, on the spot test	R. S R.
Aug	II	Unit II - Laboratory and Safety Rules - Animal Care in lab, safety protocols for Microbes study in the laboratory - safety preparations for Field Activities - safety precautions for demonstration of animal dissections	I B.Sc Zoology	6	Chalk and Talk, PPT, group discussion, OHP and You tube Links	R. S R



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LESSON PLAN 2024-2025

Class : II B.Sc Zoology

Sem : III

Sub. Code : 23OUZO31

Title of the Paper: Cell Biology

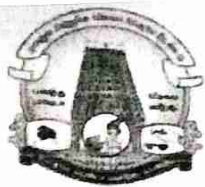
Total Hours : 60 hrs

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Microscopy: Structure, principle, magnification and applications of Compound microscope, Phase contrast microscope and Electron microscope – Tools and Techniques – Cell Fractionation, Homogenization, Centrifugation. Histological Techniques: Staining - Vital Stains. – Cytoplasmic and Nuclear Stains.	II B.Sc Zoology	9	Chalk and Talk, PPT, quiz, on the spot test	
July	II	History of cell biology – Cell theory –Types of cells (epithelial cells, Nerve cells and pancreatic cell) Difference between Prokaryotic and Eukaryotic cell. Ultra structure of an Animal Cell, Plasma Membrane – Ultra Structure,	II B.Sc Zoology	12	Chalk and Talk, OHP quiz, on the spot test	

		Models (Bilayer, Unit Membrane, Fluid Mosaic) and Functions.				
Aug	III	Protoplasm: chemical and biological properties. Ultra structure and functions of (a) Mitochondria (b) Endoplasmic Reticulum, (c) Golgi Complex, (d) Lysosome, (e) Centrioles and (f) Ribosome.	II B.Sc Zoology	9	Chalk and Talk, PPT, group discussion, OHP and YouTube Links	RSD
Sep	IV	Ultra structure and functions of Nucleus and Nucleolus – Chromosome: Structure, heterochromatin and Euchromatin, - Giant chromosome – Polytene and Lambrush chromosomes - Cell Division and Cell Cycle: Amitosis, Mitosis and Meiosis - Genetic significance of meiosis-karyotyping.	II B.Sc Zoology	15	Chalk and Talk, OHP, PPT presentations, quiz,	1/11/19
Oct	V	Cancer: Definition, types, causes, diagnosis, treatment- Apoptosis, Necrosis. Molecular basis of aging and genes responsible for aging. Stem cells: Definition – embryonic and adult stem cells.	II B.Sc Zoology	15	Chalk and Talk, PPT, group discussion, OHP presentations, quiz, open book test	RSD 1/11/19

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Shyam Lal
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LESSON PLAN

2024-2025

Class : II B.Sc Zoology

Sem : III

Sub. Code : 23OUZO3P

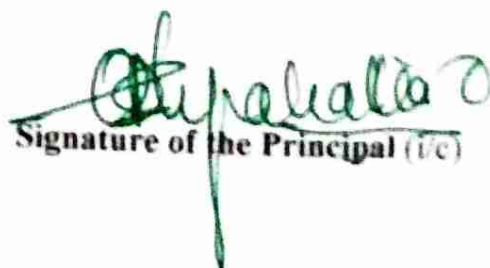
Title of the Paper: : Lab in Cell Biology & Bio instrumentation

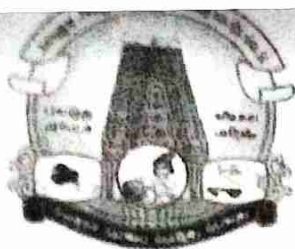
Total Hours : 48 hrs

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Microscopy: Handling of dissection and compound microscopes.	II B.Sc Zoology	3	Demo & Hands on training	
		Preparation and Identification of slides 1. Mitotic divisions with onion root tips.		6	Demo & Hands on training	
July	II	2..Different stages of Meiosis in Grasshopper Testes – (Virtual Demo only) 3.Buccal epithelium (Barrbody) preparation Slides / Spotters: 1. Mitochondria, 2. Golgi apparatus,	II B.Sc Zoology	9 6 3	Demo & Hands on training	

		3. Endoplasmic reticulum, 4. Ribosomes				
Aug	III	4. Staining and observation of polytene chromosomes in salivary glands of chironomous larva. Slides / Spotters: 5. Nucleus, 6. Nucleolus 7. Microtome	II B Sc Zoology	6 3	Demo & Hands on training Observation & Explanation	<u>RSR</u>
Sep	IV	1. pH Meter – Analysis of various samples. 2. Isolation of eukaryotic DNA / Quantification of DNA 3. Electrophoresis – AGE	II B Sc Zoology	15	Spotter Identification & Description	<u>RSR</u>
Oct	V	4. Chromatography – Paper chromatography only 5. Calorimeter 6. Centrifuge	II B Sc Zoology	15	Spotter Identification & Description	<u>RSR</u>

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LESSON PLAN
2024-2025

Class : II B.Sc Zoology

Sem : III

Sub. Code : 23OUZOSEC31

Title of the Paper: Bio Instrumentation

Total Hours : 30 Hrs

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Good Laboratory Practices: Guide lines, Laboratory symbols; Cleaning and sterilization of lab ware and reagents; handling and care of laboratory animals; Laminar flow hood: types and use; Buffers: definition and preparation of buffers, pH meter; Safety and Precautionary measures	II B.Sc Zoology	12	Chalk and Talk, PPT, group discussion , OHP presentations, quiz, on the spot test	
July	II	Biosensors - glucose biosensor, alcohol biosensor, environmental biosensors, cantilever-based biosensors, DNA biosensor.	II B.Sc Zoology	10	Chalk and Talk, PPT, group discussion , OHP presentations, quiz,	
Aug	III	Separation Techniques: Working principle and types of centrifugation, Chromatography –AGE & PAGE.	II B.Sc Zoology	13	Chalk and Talk, PPT, group discussion , OHP presentations, quiz,	

Sep	IV	Biomedical Instrumentation :-ESR measurement, haemoglobin measurement – Sahli's Heamoglobinometer, blood pressure, Electro Cardiogram (ECG).	II B Sc Zoology	10		
Oct	V	Molecular Techniques : Polymerase chain reaction; ELISA; Blotting Techniques - Southern, Western and Northern blotting.	II B Sc Zoology	15	Chalk and Talk, PPT, group discussion, OHP presentations, quiz,	

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LESSON PLAN 2024-2025

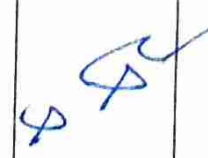
Class : II B.Sc Zoology

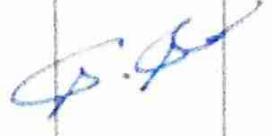
Sem : III

Sub. Code : 23OUZOSEC32

Title of the Paper: Economic Zoology

Total Hours : 30

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Apiculture: Species of honey bees – Social organisation of honey bee – selection of bees and location for apiary – Newton's bee hive – products of bee keeping – enemies and diseases (American foul brood, Chalk brood) of honey bees- nutritional and medical value of honey.	II B.Sc Zoology	6	Chalk and Talk, PPT, group discussion , OHP presentations, quiz,	
July	II	Sericulture: History of Sericulture-Mulberry and Non-mulberry silkworm types -life cycle of mulberry silkworm – diseases (Pebrine, flacherie) of silkworm. Lac Culture: Introduction –cultivation of Lac – Enemies of lac cultivation – Economic importance of Lac.	II B.Sc Zoology	6	Chalk and Talk, PPT, group discussion , OHP presentations, quiz,	

Aug	III	Aquaculture: Fresh water aquaculture - Carp culture - types of ponds - preparation - maintenance - harvesting and management Polyculture Prawn culture - Culture of Live feed organisms - Marine Aquaculture: Edible oyster and pearl oyster culture	II B Sc Zoology	6	Chalk and Talk, PPT, group discussion, OHP presentations, quiz,	
Sep	IV	Poultry Farming: Poultry industry in India - Important breeds of Poultry deep litter system - Nutritive value of egg and meat- Broiler management - Housing and equipment, Brooding, feeding and health cover of broilers, Record keeping - Culling of layers - Debeaking - Women in backyard poultry farming	II B Sc Zoology	6	Chalk and Talk, PPT, group discussion, OHP presentations, quiz,	
Oct	V	Dairy Farming: Dairy farming - advantages of dairying - classification of breeds of cattle - Indigenous and exotic breeds - Selection of dairy cattle. Common diseases- Foot and mouth disease, Mastitis, Anthrax- Dairying as a source of additional income and employment.	II B Sc Zoology	6	Chalk and Talk, PPT, group discussion, OHP presentations, quiz,	


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LESSON PLAN
2024-2025

Class : III B.Sc Zoology

Sem : V

Sub. Code : 22OUZO61P

Title of the Paper: Lab in Genetics, Ecology & Evolution and Biochemistry

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Mendelian verification of Monohybrid ratio by observations in Beads.	III B Sc Zoology	6	Hands on Practical classes	R.S. Rajal S. R.
July	II	Mendelian verification of Dihybrid ratio using coin tossing experiment	III B Sc Zoology	6	Hands on Practical classes Observation of Spotters	R.S. Rajal S. R.
Aug	III	Observation of simple Mendelian Traits in Man.	III B Sc Zoology	6	Observation of Spotters	R.S. Rajal S. R.
Sep	IV	Observation of chromosomal aberrations (Ploidy & Syndromes) Sex-influenced inheritance in Man – Colour Blindness and Haemophilia	III B.Sc Zoology	6	Hands on Practical classes	R.S. Rajal S. R.

Oct	V	III B.Sc Zoology	Principle and procedure for pH Measurements of various samples using pH meter. Principle & Procedure of Amino acids separations using Paper Chromatography Qualitative tests for protein, carbohydrates & fats.	6	Observation of Spotters	R.S. D... .. A.S.

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S. S. Sathya
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LESSON PLAN 2024-2025

Class : III B.Sc Zoology

Sem : V

Sub. Code : 220UZ062P

Title : Lab in Physiology, Microbiology & Immunology and Biotechnology

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Physiology: Qualitative analysis of nitrogenous waste products. Effect of Salivary Amylase activity in human saliva in relation to pH.	III B.Sc Zoology	6	Demo & Hands on Training	R.S. Dairah
July	II	Microbiology: Hanging drop method. Simple staining	III B.Sc Zoology	6	Demo given	R.S. Dairah
Aug	III	Immunology: Blood Grouping	III B.Sc Zoology	6	Observation of spotters	R.S. Dairah
Sep	IV	Biotechnology: Isolation of DNA in Eukaryotic cells (Virtual Demo)	III B.Sc Zoology	6	Observation of spotters	R.S. Dairah
Oct	V	PCR (Virtual Demo)	III B.Sc Zoology	6	Observation of spotters	R.S. Dairah

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LESSON PLAN

2024-2025

Class : III B.Sc Zoology

Sem : V

Sub. Code : 22OUZO51

Title : Genetics

Total Hours :60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Mendelian Inheritance – Mendel's experiments(Monohybrid and Dihybrid cross, Back or Test cross) Non Mendelian Inheritance - Interaction of Genes – Complementary genes, supplementary genes, coat colour in Rabbit(multiple Alleles) and Blood group inheritance in man.	III B.Sc Zoology	12	Chalk and Talk, PPT, quiz, on the spot test	G. JB
July	II	Linkage in Drosophila – Morgan's experiments, theories of linkage, factors affecting linkage, Crossing over, Types, mechanisms, Cytological evidence for crossing over, Significance of Crossing over, factors affecting crossing over. Mapping of Chromosomes, Sex-linked inheritance in Man(colour blindness and Hemophilia), Sex determination in man and cytoplasmic inheritance.	III B.Sc Zoology	15	Chalk and Talk, OHP quiz, on the spot test	G. JB
Aug	III	Fine structure of the gene – operon concept, genetic code, Mutation-Molecular basis of mutation – Gene mutation, chromosomal aberrations(Ploidy, Syndromes), mutagens.	III B.Sc Zoology	9	Chalk and Talk, PPT, group discussion, OHP and You tube Links	G. JB



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LESSON PLAN

2024-2025

Class : III B.Sc Zoology

Sem : V

Sub. Code : 22OUZODSE5A

Title : Ecology & Evolution

Total Hours : 60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Scope-Branches of Ecology- Biotic factors, Abiotic factors - Water, Light, Temperature and Soil - Animal relationships - Symbiosis, Commensalism, Mutualism, Antagonism, predation, parasitism and competition. Ecosystem - Pond ecosystem - Primary production, Secondary Production, Food Chain - Food Web - Trophic Levels - energy flow - Ecological Pyramids - Biomass, Number and energy.	III B.Sc Zoology	12	Chalk and Talk, PPT, quiz, on the spot test	R.S. Datta 
July	II	Population - Definition - Natalty, Mortality, Population fluctuation dispersal, Age pyramid, Population estimation - Population equilibrium - Regulation. Community ecology - Types of Communities - characteristics of community. Wild Life resources - Wild life conservation and Management. Stratification - Ecotone - edge effect - Ecological niche - Ecological succession.	III B.Sc Zoology	9	Chalk and Talk, OHP quiz, on the spot test	R.S. Datta 

Sep	IV	Breeding-inbreeding, Outbreeding – heterosis in Hybrid Vigour, Eugenics and Euthenics, Inborn errors of metabolism(Alkaptonuria, Phenyl ketonuria) and Genetherapy.	III B.Sc Zoology	15	Chalk and Talk, OHP, PPT presentations, quiz,	G-2B R. S. Datta
Oct	V	Hardy – Weinberg's Law- gene frequency, genotype frequency and factors affecting gene frequency. DNA as genetic material – Bacterial recombination, conjugation, Transformation, Transduction and Sexduction.	III B.Sc Zoology	9	Chalk and Talk, PPT, group discussion, OHP presentations, quiz, open book test	G-2B

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2024-2025

Class : III B.Sc Zoology

Sem : V

Sub. Code : 22OUZODSE5B

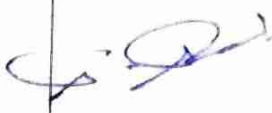
Title : Biochemistry

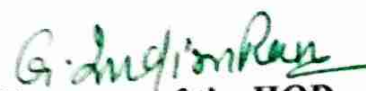
Total Hours :60

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Carbohydrates: classification and biological importance - carbohydrate metabolism - Glycogenesis, Glycolysis, Citric acid cycle and Hexose Monophosphate Shunt	III B.Sc Zoology	12	Chalk and Talk, PPT, quiz, on the spot test	MAL
July	II	Protein - Structure, classification, Configuration of protein - Primary, Secondary, Tertiary and Quaternary, and biological importance - Transamination, Decarboxylation, Transdeamination, Transmethylation, Urea cycle. Ramachandran Plot.	III B.Sc Zoology	9	Chalk and Talk, OHP quiz, on the spot test	MAL
Aug	III	Lipids: Classification and structure of cholesterol- β -oxidation of fatty acids - Biological importance of lipids- biosynthesis of fatty acids.	III B.Sc Zoology	15	Chalk and Talk, PPT, group discussion, OHP and You tube Links	MAL
Sep	IV	Enzymes: classification, physico-chemical nature and mechanism of enzyme action, factors affecting enzyme activity - Applications of enzymes and coenzymes.	III B.Sc Zoology	9	Chalk and Talk, OHP, PPT presentations, quiz,	MAL
Oct	V	Separation techniques - Paper Chromatography, PAGE, Centrifugation, Analytical techniques - PH meter, Electrophoresis, Colorimeter, Spectrophotometer.	III B.Sc Zoology	15	Chalk and Talk, PPT, group discussion, OHP presentations, quiz, open book test	MAL

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Aug	III	Pollution – Types(Air Pollution, Water Pollution), their biological effect and control, solid waste disposal and management, Recycling process – Global warming - Ozone layer and its significance , Acid rain, Biomagnification- Environmental Impact Assessment.	III B.Sc Zoology	15	Chalk and Talk, PPT, group discussion , OHP and You tube Links	
Sep	IV	Biochemical origin of life, Urey and Miller's experiment, Geological time scale, Evidences of evolution:-Morphological, Homologous and Analogous structures (example-forelimbs) – vestigial organs (Vermiform appendix, Plica semilunaris) – connecting links. Embryological evidences, Biochemical evidences. Lamarckism and Neo-Lamarckism, Darwinism and Neo-Darwinism- Mimicry - Batesian and Mullerian Mimicry.	III B.Sc Zoology	9	Chalk and Talk, OHP, PPT presentations, quiz,	R.S. Dey
Oct	V	Unit – V Fossils : Dating of fossils, Variations , Isolating mechanism: Geographic isolation, Reproductive isolation - Speciation types, mechanism of Allopatric and Sympatric speciation - Human evolution: Organic evolution of man, Cultural and future evolution of man.	III B.Sc Zoology	15	Chalk and Talk, PPT, group discussion , OHP presentations, quiz, open book test	R.S. Dey


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E.M.GOPALAKRISHNAKONEYADAV WOMEN'S COLLEGE

An Autonomous Institution -Affiliated to Madurai Kamaraj University

Re-accredited(3rd Cycle)with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN

2024-2025

Class : III B.Sc Zoology

Sem : V

Sub. Code : 22OUZOSE5

Title : Biostatistics and Bioinformatics

Total Hours :30

Month	Unit	Description of the Syllabus	Class	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Unit - I Data Collection - Sources of Primary and secondary data - Classification and Tabulation, Organization of data: Individual, discrete frequency series - Types of variables - Derived variables.	III B.Sc Zoology	6	Chalk and Talk, PPT, quiz, on the spot test	
July	II	Unit - II Diagramatic Representation of Data - Bar diagram, Pie diagram, Graphical Representation of Data - Histogram, Frequency polygon, Frequency Curve.	III B.Sc Zoology	6	Chalk and Talk, OHP quiz, on the spot test	
Aug	III	Unit - III Measurement of Central tendency - Mean, Median and Mode ,Correlation, ANOVA-One Way ANOVA.	III B.Sc Zoology	6	Chalk and Talk, PPT, group discussion , OHP and You tube Links	
Sep	IV	Internet concepts, Bioinformatics a multidisciplinary approach, Scope and applications of Bioinformatics. Biological databases- Nucleic acid databases (Genbank, DDBJ and EMBL) Protein databases - primary, secondary, Specialized databases-TIGR, Structural databases -PDB	III B.Sc Zoology	6	Chalk and Talk, OHP, PPT presentations, quiz,	

Oct	V	Sequence similarity search (FASTA and BLAST). Significance of E-value. Introduction to ORF and primer designing. Multiple sequence alignment (CLUSTAL W), conserved domain search (Motif). Phylogenetic analysis- phylogenetic tree construction	III B.Sc Zoology	6	Chalk and Talk, PPT, group discussion, OHP presentations, quiz, open book test	
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