Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Autonomous)

Department Of Zoology

Annual Teaching Plan
2020-2021

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Dr. K. P. Shinde

Subject: Animal diversity

Course title: B.Sc. I **Semester: I**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
3	2	5	Unit I	Importance of animal taxonomy Kingdom Protista
Month: December			**Module unit**	**Sub unit planned**
5	4	9	Unit I	Phylum- Porifera
Month: January			**Module unit**	**Sub unit planned**
3	4	7	Unit I	Phylum: Cnidaria

Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Skeletal System Pectoral girdle
Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	4	6	Unit I	pelvic girdle
Month: June			**Module unit**	**Sub unit planned**
2	4	6	Unit I	pelvic girdle

Subject: Physiology and Biochemistry
Course title: B.Sc. II **Semester: III**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit II	Excretion structure of Nephron
Month: December			**Module unit**	**Sub unit planned**
3	4	7	Unit II	Mechanism of urine formation
Month: January			**Module unit**	**Sub unit planned**
3	4	7	Unit II	Counter current mechanism

Subject: Cell biology, Genetics and Evolution
Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Major event in history of life, Geological time scale
Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit III	Introduction to evolutionary theories, Lamarckism
Month: June			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit III	Darwinism & Neo Darwinism

Subject: Applied Zoology
Course title: B.Sc. III **Semester: V**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
3	2	5	Unit I	Introduction to host parasite relationship
Month: December			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Host- Definitive, intermediate host
Month: January			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	4	6	Unit I	Parasitism: types of parasites, Symbiosis, zenosis

Subject: Ecology & Aquatic Biology
Course title: B.Sc. III **Semester: VI**

Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Ecology- Scope of ecology
Month: June			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Structure, function types & component of ecosystem
Month: July			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Energy flow& cycling of minerals, food chain, food web, ecological pyramids

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. I	Practical I & II	B_4, B_6	Animal diversity, Comparative Anatomy & Developmental Biology of Vertebrates
B. Sc. II	Practical IV	M_1	Cell biology, Genetics, Evolution and Ethology
B. Sc. III	Practical VII	Z_1	Ecology & Aquatic Biology

Dr. K. P. Shinde

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DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Dr. G. K. Sontakke

Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Skeletal System Pectoral girdle
Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	4	6	Unit I	pelvic girdle
Month: June			**Module unit**	**Sub unit planned**
2	4	6	Unit I	pelvic girdle

Subject: Cell biology, Genetics and Evolution
Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Major event in history of life, Geological time scale
Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit III	Introduction to evolutionary theories, Lamarckism
Month: June			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit III	Darwinism & Neo Darwinism

Subject: Ecology & Aquatic Biology
Course title: B.Sc. III **Semester: VI**

Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Ecology- Scope of ecology
Month: June			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Structure, function types & component of ecosystem
Month: July			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Energy flow& cycling of minerals, food

				chain, food web, ecological pyramids

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. I	Practical I & II	B_4, B_6	Animal diversity, Comparative Anatomy & Developmental Biology of Vertebrates
B. Sc. II	Practical IV	M_1	Cell biology, Genetics, Evolution and Ethology
B. Sc. III	Practical VII	Z_1	Ecology & Aquatic Biology

Dr. G. K. Sontakke

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DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Dr. T. C. Gaupale
Subject: Animal diversity
Course title: B.Sc. I **Semester: I**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Phylum Platyhelminthes
Month: December			**Module unit**	**Sub unit planned**
3	4	7	Unit I	Phylum-Nemathelminthes
Month: January			**Module unit**	**Sub unit planned**
3	4	7	Unit II	Phylum-Annelida
Month: February			**Module unit**	**Sub unit planned**
2	4	6	Unit II	Metamerism in Annelida

Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit IV	Chick Embryology, Introduction to Embryology
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Fertilization in chick Development up to72 hrs
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Development up to72 hrs

Subject: Physiology and Biochemistry
Course title: B.Sc. II **Semester: III**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Endocrinology
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Thyroid, parathyroid, pancreas, adrenal gland
Month: January			**Module unit**	**Sub unit planned**
3	4	7	Unit III	Hypothalamus, Testes, Ovary

Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Enzymes

Subject: Cell biology, Genetics and Evolution
Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Organic variation, Isolating mechanism Natural selection
Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit III	Industrial melanism, Types of natural selection
Month: June			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit III & IV	Artificial selection, Mass extinction
Month: July			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	4	6	Unit IV	Role of extinction in evolution

Subject: Applied Zoology
Course title: B.Sc. III **Semester: V**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit VIII	Fish technology
Month: December			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit VIII	Fish farming construction & maintenance
Month: January			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit VIII	Induced breeding , Transportation of fish
Month: February			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit II	Epidemiology of disease

Subject: Immunology
Course title: B.Sc. III **Semester: VI**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Overview of immune system Introduction of immunology
Month: May			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit I	Component of immune system
Month: June			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
4	4	8	Unit II	Cells & organ of immune system, Hematopoiesis Cells of immune system & organ
Month: July			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
3	2	5	Unit II	Lymphoid organs

Annual Teaching Plan (Practical)

Class	**Practical No.**	**Batch**	**Practical based on paper**
B. Sc. I	Practical I Practical II	B_1, B_3	Animal diversity, Comparative Anatomy & Developmental Biology of Vertebrates
B. Sc. II	Practical IV	M_1, M_2	Physiology and Biochemistry
B. Sc. III	Practical VII	Z_1	Immunology

Dr. T. C. Gaupale

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DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: - Ms. Najnin A. Patel
Subject: Animal diversity
Course title: B.Sc. I **Semester: I**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit IV	Class-Reptiles General features and classification up to order
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	classification up to order in class reptiles, Venomous and non-venomous snake and types of venom
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Class Aves, General features and classification up to order, Flight Adaptation
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Class Mammals Classification up to order

Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit II	Sense organs & types of receptors
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Early embryonic development Gametogenesis- Spermatogenesis, Oogenesis with reference to mammals
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit III	External fertilization (Amphibia), internal fertilization mammals, early embryonic development
Month: July			**Module unit**	**Sub unit planned**
2	2	4	Unit III	Fate map & Neurulation in frog embryo

Subject: Physiology and Biochemistry

Course title: B.Sc. II **Semester: III**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Carbohydrate metabolism, Glycolysis
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Kreb cycle, Pentose phosphate pathway Gluconeogenesis, Glycogen metabolism
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit III Unit IV	Review of electron transport chain, Lipid metabolism, Biosynthesis of fatty acids
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Beta oxidation of palmitic acid, Protein metabolism, Transamination, Deamination

Subject: Cell biology, Genetics and Evolution

Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Ultra-structure of cell organelles, Prokaryotic & Eukaryotic cell
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Ultra-structure & function of plasma membrane Nucleus, Mitochondria,
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Golgi Apparatus, Endoplasmic reticulum Ribosome
Month: July			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Mendel's work on transmission of traits, Genetic variation

Subject: Animal Biotechnology

Course title: B.Sc. III **Semester: V**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
3	2	5	Unit II	Molecular techniques in gene manipulation Cloning Vectors
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Restriction enzymes, Transformation

				techniques
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Construction of genomic DNA & cDNA library
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Southern, Northern, Western bloting PCR, DNA fingerprinting

Subject: Immunology
Course title: B.Sc. III **Semester: VI**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Antigens, Basic properties of antigen
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit III	B & T Cell epitopes, Heptens, Adjuvant
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Antibodies – structure, class & function of antibodies
Month: July			**Module unit**	**Sub unit planned**
2	2	4	Unit III	Hybridoma technology-monoclonal & polyclonal antibody, ELISA & its types

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. I	Practical I & Practical II	B_6	Animal diversity, Comparative Anatomy & Developmental Biology of Vertebrates
B. Sc. II	Practical IV	B_1, BT_1	Physiology and Biochemistry
B. Sc. III	Practical VII	Z_1	Animal Biotechnology

Ms. Najnin A. Patel

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DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Ms. Geetanjali B. Satale
Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I **Semester:** II

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit I	Integumentary system- Derivatives of integuments w.r.t. glands
Month: May			**Module unit**	**Sub unit planned**
2	-	2	Unit I	Integumentary system- Derivatives of integuments w.r.t. glands
Month: June			**Module unit**	**Sub unit planned**
2	-	2	Unit I	Digital tips
Month: July			**Module unit**	**Sub unit planned**
2	-	2	Unit I	Digital tips

Subject: Physiology and Biochemistry
Course title: B.Sc. II **Semester: III**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Nerve & Muscle, Structure of Neuron
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Resting membrane potential Origin of action potential & its propogation in non-myelinated nerve fiber
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Skeletal muscle

Subject: Cell biology, Genetics and Evolution
Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Linkage & crossing over
Month: May			**Module unit**	**Sub unit planned**

4	4	8	Unit I	Linkage & crossing over, Types of linkage
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Mechanism of crossing over ,Coupling & repulsion theory, Cytological evidences of crossing over
Month: July			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Mutation

Subject: Animal Biotechnology

Course title: B.Sc. III

Semester: V

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit IV	Culture techniques & Application
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Molecular diagnosis of genetic disease
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	rDNA technology
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Gene therapy, Micro-techniques & application

Subject: Ecology & Aquatic biology

Course title: B.Sc. III

Semester: VI

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit II	Aquatic biomes Introduction to aquatic biomes
Month: May			**Module unit**	**Sub unit planned**
2	2	4	Unit II	Aquatic biomes Introduction to aquatic biomes
Month: June			**Module unit**	**Sub unit planned**
3	4	7	Unit II	Fresh water ecosystem
Month: July			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Marine biology
Month: August			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Adaption of deep sea organisms, Coral reefs, Sea weeds

Annual Teaching Plan (Practical)			
Class	**Practical No.**	**Batch**	**Practical based on paper**
B. Sc. II	Practical IV	B2	Cell biology, Genetics, Evolution and Ethology
B. Sc. III	Practical VII	Z2	Aquatic biology

GBatale

Ms. Geetanjali B. Satale

Dr. K. P. Shinde

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DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: - Ms. Kranti L. Kamble
Subject: Animal diversity
Course title: B.Sc. I
Semester: I

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit II	Phylum Arthropoda
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Phylum Arthropoda
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Phylum Mollusca
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Phylum Echinodermata

Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I
Semester: II

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Brief account of gills
Month: May			**Module unit**	**Sub unit planned**
3	4	7	Unit I	Lungs, air sacs & swim bladder
Month: June			**Module unit**	**Sub unit planned**
3	4	7	Unit I	Lungs, air sacs & swim bladder

Subject: Applied Zoology
Course title: B.Sc. III
Semester: V

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Parasitic protozoan *Plasmodium vivax*
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit III	*Helicoverpa armigera*
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit III	*Pyrilla perpusilla & Papilio demoleus* *Callosobruchus chinesis,* *Sitophilus oryzae*

Month: February			Module unit	Sub unit planned
3	4	7	Unit III	*tribolium castaneum*, mili bug, aphids & white fly

Subject: Ecology & Aquatic biology

Course title: B.Sc. III **Semester: VI**

Month: April			Module unit	Sub unit planned
Lectures	Practical	Total		
2	2	4	Unit IV	Lakes- Origin & classification
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Characteristics light temperature thermal stratification
Month: June			**Module unit**	**Sub unit planned**
3	4	7	Unit IV	Bicarbonate phosphate & nitrates

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. I	Practical I	B5, B8	Animal Diversity
	Practical II	B9	Comparative Anatomy and Developmental biology of Vertebrates
B. Sc. II	Practical III	B2	Mammalian Physiology and Biochemistry
B. Sc. III	Practical VIII	Z2	Immunology

Ms. Kranti L. Kamble

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DEPARTMENT OF ZOOLOGY

Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Dr. Tejashri C. Patil

Subject: Comparative Anatomy & Developmental Biology of Vertebrates

Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit III	Late embryonic development- Implantation of embryo in human
Month: May			**Module unit**	**Sub unit planned**
4	-	4	Unit III	Formation of human placenta & its function
Month: June			**Module unit**	**Sub unit planned**
2	-	2	Unit III	Types of placenta in mammals

Subject: Physiology and Biochemistry

Course title: B.Sc. II **Semester:III**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Physiology of Digestion in Alimentary Canal
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Absorption of Carbohydrate, proteins
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Absorption of lipids

Subject: Cell biology, Genetics and Evolution

Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit IV	Direct evidences of evolution Types of fossils
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Process of fossilization Dating of fossils Geiger-Muller Counter
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Species concept Biological species concept Modes of speciation
Month: July			**Module unit**	**Sub unit planned**

4	4	8	Unit IV	Macroevolution Macro evolutionary principals Darwin finches

Subject: Applied Zoology
Course title: B.Sc. III **Semester:V**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit VI	Dairy technology Selection of breed Types of breed
Month: December			**Module unit**	**Sub unit planned**
3	-	3	Unit VI	Management of Dairy technology
Month: January			**Module unit**	**Sub unit planned**
2	-	2	Unit VI	Poultry Farming Types of poultry breed Management of poultry

Subject: Immunology
Course title: B.Sc. III **Semester: VI**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit VI	Immune system in health & disease
Month: May			**Module unit**	**Sub unit planned**
4	-	4	Unit VI	Gell & Coomb's classification Types of hypersensitivity
Month: June			**Module unit**	**Sub unit planned**
4	-	4	Unit VI	Concept of autoimmunity & immunodeficiency
Month: July			**Module unit**	**Sub unit planned**
4	-	4	Unit VI & VII	Autoimmune disorder Vaccine

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. II	Practical IV	B3, B4	Cell biology, Genetics, Evolution and Ethology

Name and Signature of Teacher

Dr. K. P. Shinde
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DEPARTMENT OF ZOOLOGY

Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Dr. Sneha S. Desai

Subject: Animal diversity

Course title: B.Sc. I **Semester: I**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit III	Phylogenetic tree in Chordate
Month: December			**Module unit**	**Sub unit planned**
4	-	4	Unit III	Protochordata Agnatha: General feature of Agnatha and classification of cyclostomes up to classes Peculiar characteristic of Petromyzon and myxin
Month: January			**Module unit**	**Sub unit planned**
4	-	4	Unit III	Class: Pisces General features and classification up to order Difference between cartilaginous and bony fishes Importance of osmoregulation in fishes
Month: February			**Module unit**	**Sub unit planned**
4	-	4	Unit III	Class-Amphibia General features and classification up to order Parental care in Amphibia

Subject: Comparative Anatomy & Developmental Biology of Vertebrates

Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit I	Digestive system of Fish, Amphibia
Month: May			**Module unit**	**Sub unit planned**
4	-	4	Unit I	Digestive system of reptiles, aves & mammals and its comparative account
Month: June			**Module unit**	**Sub unit planned**
2	-	4	Unit I Unit II	Digestive gland-Liver, pancreas salivary gland Introduction to Urinogenital system
Month: July			**Module unit**	**Sub unit planned**
2	-	2	Unit II	Archenephros, pronephros, mesonephros & metanephros Evolution of uriogenital ducts

Subject: Physiology and Biochemistry
Course title: B.Sc. II **Semester: III**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
3	4	7	Unit II	Respiration Pulmonary ventilation, respiratory volumes & capacity
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Transport of oxygen, carbon dioxide in blood Respiratory diseases
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit II	Cardiovascular system Composition of blood Structure of heart Origin & conduction of cardiac impulse Cardiac cycle
Month: February			**Module unit**	**Sub unit planned**
2	4	6	Unit II	Heart diseases & heart attack Symptoms & remedies

Subject: Cell biology, Genetics and Evolution
Course title: B.Sc. II **Semester: IV**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Mendelian genetics & its extension Principal of inheritance
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Chromosomal theory of inheritance Incomplete dominance & codominance
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit I Unit II	Multiple alleles w.r.t. ABO Rh factor Extrachromosomal inheritance Sex determination
Month: July			**Module unit**	**Sub unit planned**
4	2	6	Unit II	Sex determination Dosage compensation Sex chromosomal theory Genic balance theory Haploidy- diploidy mechanism of sex determination

Subject: Animal Biotechnology
Course title: B.Sc. III **Semester: V**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit I	Concept & Scope of Biotechnology
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit I	DNA structure DNA replication

Month: January			Module unit	Sub unit planned
4	4	8	Unit I	Transcription in Prokaryotes & Eukaryotes
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Translation in Prokaryotes & Eukaryotes
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Animal cell culture

Subject: Immunology
Course title: B.Sc. III **Semester: VI**

Month: April			Module unit	Sub unit planned
Lectures	Practical	Total		
2	2	4	Unit V	Working of immune system Structure & function of MHC
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit I	Exogenous & Endogenous pathway of antigen presentation
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit I Unit II	Exogenous & Endogenous pathway of antigen processing
Month: July			**Module unit**	**Sub unit planned**
3	4	7	Unit II	Cytokines & complement system

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. II	Practical III	B3	Cell biology, Genetics, Evolution and Ethology
B. Sc. III	Practical VI	Z1	Applied Zoology

Name and Signature of Teacher

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Head,
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Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Ms. Yogita S. Pujari
Subject: Comparative Anatomy & Developmental Biology of Vertebrates
Course title: B.Sc. I **Semester: II**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	-	2	Unit IV	Fundamental development, process in development
Month: May			**Module unit**	**Sub unit planned**
3	-	3	Unit IV	gene activation, specification , Determination, differentiation,
Month: June			**Module unit**	**Sub unit planned**
3	-	3	Unit IV	Intercellular communication, cell movement & cell dealth

Subject: Animal Biotechnology
Course title: B.Sc. III **Semester:** V

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit III	Genetically modified organism Production of cloned & transgenic animals
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Application of transgenic animals
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Production of transgenic plants
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit III	Application of transgenic plants

Subject: Ecology & Aquatic biology
Course title: B.Sc. III **Semester:** VI

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		

2	2	4	Unit V	Management of aquatic resources
Month: May			**Module unit**	**Sub unit planned**
3	4	7	Unit V	Causes of pollution
Month: June			**Module unit**	**Sub unit planned**
3	4	7	Unit V	Water quality assisment-BOD
Month: July			**Module unit**	**Sub unit planned**
3	4	7	Unit V	Water quality assisment- COD

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. II	Practical III Practical IV	BT1, B4	Mammalian Physiology and Biochemistry Cell biology, Genetics, Evolution and Ethology
B. Sc. III	Practical VII	Z2	Applied Zoology

yspujari

Ms. Yogita S. Pujari

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VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)
DEPARTMENT OF ZOOLOGY
Academic year: 2020-21

Annual Teaching Plan

Teacher Name: -Ms. Jyoti S. Sathe
Subject: Applied Zoology
Course title: B.Sc. III **Semester: V**

Month: November			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit IX	Animal feed preparation
Month: December			**Module unit**	**Sub unit planned**
4	4	8	Unit IX	Cattle feed, rat feed, fish feed, poultry feed
Month: January			**Module unit**	**Sub unit planned**
4	4	8	Unit X	Animal & crop waste management Poultry waste management
Month: February			**Module unit**	**Sub unit planned**
4	4	8	Unit X	Sugarcane & wheat waste management

Subject: Ecology & Aquatic biology
Course title: B.Sc. III **Semester: VI**

Month: April			**Module unit**	**Sub unit planned**
Lectures	Practical	Total		
2	2	4	Unit IV	Nutrient cycle
Month: May			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Stream & their conservation
Month: June			**Module unit**	**Sub unit planned**
4	4	8	Unit IV	Physicochemical environment Adaptation of hill stream, fishes & conservation

Annual Teaching Plan (Practical)

Class	Practical No.	Batch	Practical based on paper
B. Sc. II	Practical II	B1	Cell biology, Genetics, Evolution and Ethology
B. Sc. III	Practical V	Z2	Animal Biotechnology

Ms. Jyoti S. Sathe

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